



October 31, 2012

Project #: 146899/07

Ms. Karen Stromberg  
Massachusetts Department of Environmental Protection  
205B Lowell Street  
Wilmington, Massachusetts 01887

Subject: Phase V Remedy Operation Status - Inspection & Monitoring Report  
April 1, 2012 through September 30, 2012  
Former Varian Facility Site  
Beverly, Massachusetts  
MADEP # 3-0485

Dear Ms. Stromberg:

On behalf of Varian Medical Systems, Inc., Shaw Environmental & Infrastructure, Inc. has prepared a Phase V Remedy Operation Status - Inspection & Monitoring Report summarizing the activities conducted from April 1, 2012 through September 30, 2012 for the former Varian Facility Site in Beverly, Massachusetts. A copy of this report has also been provided to the Varian Public Involvement Plan (PIP) repository at the Beverly City Library, the City of Beverly Board of Health, and the Beverly Conservation Commission. A notice of availability for this document has also been issued to the PIP mailing list established for this Site.

If you have any questions regarding the report, please do not hesitate to contact me.

Sincerely,  
**Shaw Environmental & Infrastructure, Inc.**

Raymond J. Cadorette  
Project Manager

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**PHASE V REMEDY OPERATION STATUS  
INSPECTION & MONITORING REPORT  
April 1, 2012 through September 30, 2012**

**FORMER VARIAN FACILITY SITE  
150 SOHIER ROAD  
BEVERLY, MASSACHUSETTS 01915**

MADEP Site # 3-0485

October 31, 2012

**Shaw Environmental & Infrastructure, Inc.**

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## 1.0 INTRODUCTION AND BACKGROUND

### 1.1 Introduction

On behalf of Varian Medical Systems, Inc. (Varian), Shaw Environmental & Infrastructure, Inc. (Shaw) has prepared this semi-annual Remedy Operation Status (ROS)-Inspection and Monitoring Report for the former Varian facility located at 150 Sohier Road and other properties located in the vicinity (the Site) in Beverly, Massachusetts (Release Tracking Number (RTN) 3-0485). A Site Location Map illustrating the location of the former Varian facility is attached as **Figure 1**, and a Site Plan is attached as **Figure 2**. This semi-annual report summarizes activities conducted during the period of April 1, 2012 through September 30, 2012. As required, the Massachusetts Department of Environmental Protection (MADEP) Comprehensive Response Action Transmittal Form (BWSC108) and Remedial Monitoring Report (RMR) associated with this submittal were submitted electronically to MADEP. Complete copies of BWSC108 and the RMR are included in **Appendix A**. This Phase V Remedy Operation Status - Inspection and Monitoring Report has been formatted to reference the requirements outlined in Section 310 CMR 40.0892(2) of the Massachusetts Contingency Plan (MCP).

Results of remedial activities and monitoring conducted during this reporting period are presented in this report.

### 1.2 Background

Based on the Phase II Comprehensive Site Assessment (CSA) completed in 2000 (IT, 2000), a condition of No Significant Risk existed at the Site with the exception of potential future significant risk associated with groundwater use in the area identified as a Potentially Productive Aquifer (PPA) north of Route 128. Groundwater concentrations in this area were above applicable Massachusetts Drinking Water Standards. As a result, one of the stated remedial action goals in the December 2001 Phase IV Remedy Implementation Plan (Phase IV Plan) submitted to MADEP for the above-referenced Site, was to achieve Drinking Water Standards in this area of the site (IT, 2001).

The Phase IV Plan proposed remedial actions for addressing volatile organic compounds (VOCs) in soil and groundwater at the subject Site. *In situ* oxidation of VOCs in soil and groundwater using permanganate solution was chosen as the best remedial alternative for the Site. The Phase IV Plan proposed treatment in the "source areas" to achieve these objectives. The Potential Source Location (PSL) areas at the former facility identified in the Phase IV Plan as potentially affecting the GW-1 area are listed below:

- PSL 5 – Potential former septic tank near Building 3
- PSL 6 – Building 6 - Potential former septic tank/leach field
- PSL 9 – Inspection pit near Building 3
- PSL 11 – Building 3 laboratory
- PSL 12 – Potential former lime pit near Building 3

Other PSL areas that do not impact the PPA and certain other downgradient areas have been included in the *in situ* oxidation program to expedite groundwater cleanup. These areas include PSL 7--Building 5 Lab, PSL 10--open field at south end of 150 Sohier Road, downgradient treatment areas at 31 Tozer Road, and in the Longview/Hill Street area.

Implementation of the Comprehensive Response Action, including the injection of permanganate solution, began in July 2002 and a Phase IV As-Built and Final Inspection Report (Shaw, 2002a) detailing initial Phase IV activities including permitting, well installation, construction of the remedial treatment system, and initial implementation of comprehensive actions was submitted to MADEP in October 2002. The Phase IV As-Built and Final Inspection Report also provided results of additional soil and groundwater analyses, identified minor modifications made to the Phase IV Plan, and documented the final inspection of the remedial system.

In December 2002, Varian submitted a Remedy Operation Status Opinion (Shaw, 2002b), which stated that the performance standards for ROS, as specified in 310 CMR 40.0893(2), have been achieved and will be maintained at the Site. A Response Action Outcome (RAO) has not yet been achieved at the Site, and the operation and maintenance of the remedial action will proceed under Remedy Operation Status.

The sodium permanganate treatment conducted at the Site since 2002 has produced significant reductions in chlorinated VOC levels at multiple depths in groundwater across the Site. These remedial activities are reported to MADEP in regular semi-annual ROS reports. As detailed in the October 2006 status report, bioremediation was proposed as a supplemental remedial approach to address two small areas at the Site (Shaw, 2006). These areas shown on **Figure 3** include shallow groundwater with residual trichloroethene (TCE) impacts located close to the Unnamed Stream at the northeast corner of the Site. Bioremediation was used to address the shallow groundwater by the Unnamed Stream because permanganate treatment may affect the stream. The second area is at the northeast corner of Building 3 where deep overburden groundwater is impacted with residual 1,1,1-trichloroethane (TCA).

Subsequent to the start of Comprehensive Response Actions, the PPA designation for the area to the north of Route 128 was removed by MADEP and, as a result, Drinking Water Standards no longer apply to this area. Therefore, the Remedial Action Goal specified in the Phase IV Plan to achieve drinking water standards in downgradient wells in the PPA area such as BR-1 is no longer applicable. As presented in the October 30, 2010 status report (Shaw, 2010), the following updated remedial action goals will be used for ongoing response actions being conducted under Phase V ROS at the Site:

1. Maintain compliance with Upper Concentration Limit (UCLs)
2. Achieve a condition of No Significant Risk for site workers in Building 3 (RTN 3-28531), as well as other site buildings, by remediating, where present, elevated VOC concentrations in soil and groundwater beneath the building. In the case of Building 3, the preference would be to achieve this condition without the continued operation of a soil vapor extraction (SVE) system.
3. Limit rebound in VOC source areas such that potential impacts to indoor air in downgradient areas continue to pose No Significant Risk,
4. Demonstrate that VOC concentrations in groundwater at the Site do not represent an uncontrolled source for impacts to surface water, and
5. Demonstrate that VOC concentrations in soil and groundwater at the Site continue to pose No Significant Risk in accordance with current MADEP requirements.

To achieve these goals, the previously proposed remediation planning criteria will continue to be applied to focus remediation activities at the Site. The goals include the decrease of target VOC concentrations in certain source area wells to 50 percent or less of the UCL and the reduction of target VOC concentrations (including breakdown products) in treatment areas by at least 50 percent below pretreatment levels in order to mitigate potential post-remediation rebound effects. These goals are consistent with MADEP guidance (Policy #WSC-04-160) on the feasibility of achieving background concentrations which indicates that the reduction of risk to 50% of a level where No Significant Risk is achieved will be considered appropriate site closure criteria with Presumptive Certainty (MADEP, 2004b).

## **2.0 DESCRIPTION OF OPERATION, MAINTENANCE, AND/OR MONITORING ACTIVITIES (310 CMR 40.0892 (2)(a))**

The following sections summarize Remedy Operation Status activities that were conducted during the reporting period of April 1, 2012 through September 30, 2012.

### **2.1 Permanganate Injection and Monitoring Activities**

Injection locations for the 2012 permanganate treatment program included: deep overburden wells OB12-DO (north of Building 3), AP26-DO (west of Building 1), AP12-DO (east of Building 3) and OB35-DO (beneath Building 5), and also included bedrock wells OB25-BR (west of Building 1) and OB27BR (southwest corner of Building 7). Well locations are illustrated on **Figures 2** and **3**.

The 2012 permanganate injection program was initiated on July 25, 2012 and will continue into the next reporting period. Volumes of sodium permanganate injected during this reporting period are summarized on **Table 1**. The permanganate solution was applied to the target wells manually under gravity flow conditions. Monitoring of the permanganate treatment program continued during this reporting period and results are discussed in later sections of this report.

During this reporting period, 40 percent sodium permanganate solution was delivered to the Site in 250 gallon totes which were stored in an on-site shed with secondary containment. Prior to conducting treatment activities, the permanganate was diluted to an approximate 20 percent solution. A tote placed in the bed of a pickup truck was used to transport the 20 percent permanganate solution to the majority of individual injection wells and then allowed to flow by gravity into the wells. Application of permanganate at select well locations and at wells located inside facility buildings was performed by transferring the 20 percent permanganate solution into 5-gallon containers which were manually transported to a well.

The permanganate totes, drums, hoses, portable containers, pumps, and associated equipment were periodically inspected during this reporting period to ensure no leaks occurred. Additionally, the spill containment features of the storage shed were inspected periodically during this monitoring period. No problems or releases were reported.

## 2.2 Bioremediation Injection and Monitoring Activities

The original bioremediation program proposed for a portion of the Site was detailed in the October 2006 ROS report and included treatment at eight wells in the Building 9 area near the Unnamed Stream as shown on **Figure 3**. As discussed in previous status reports, the bioremediation program has been periodically modified based upon site conditions and monitoring results. Prior to this reporting period bioremediation consisted of the injection of lactate. As detailed in the April 2012 ROS report, adjusting to emulsified vegetable oil (EVO) as a carbon source for reductive dechlorination was recommended to decrease the frequency of treatment applications.

During this reporting period, EVO application was performed in July 2012 at shallow overburden wells BW-2, BW-5, BW-8, BW-9, OB9-S and OB15-S to facilitate continued complete reductive dechlorination of residual VOC daughter products in the area. In addition to these wells, EVO applications were also performed at nearby well MW-9 and BW-6 due to low injection flow in OB15-S and OB9-S. During each injection event, EVO was mixed with potable water to an appropriate dilution in plastic 55-gallon drums and applied into target wells manually under gravity flow conditions. Additional potable water was then injected after injection of EVO to help distribute the carbon source over a larger area of the aquifer. A summary of the volume of EVO and flush water injected during this reporting period is provided in **Table 2**.

The emulsified vegetable oil drums, hoses, portable containers, pump, and all associated equipment were periodically inspected during injection activities. No problems or releases were noted.

Bioremediation injections in the deep overburden wells near Building 3 (AP13-DO, AP23-DO, and AP24-DO) were not conducted during this reporting period. Plans to conduct additional bioremediation in the deep overburden aquifer in this area have been postponed to assess if a permanganate re-circulating system would be more effective at treating deep overburden VOC impacts beneath Building 3 (see Section 4.1).

## 2.3 Sampling at Off-Site Tozer Road Properties

### 2.3.1 Soil Vapor Sampling 30 Tozer Road

As discussed in the previous ROS report, groundwater analytical data from monitoring well OB42-S at 30 Tozer Road indicated concentrations of TCE, tetrachloroethene (PCE), and cis-1,2,- dichloroethene (DCE) above GW-2 standards in October 2011. In addition, analytical results of the sub-surface vapor sample collected outside the 30 Tozer Road building footprint in January 2012 adjacent to OB42-S indicated a concentration of TCE that suggested additional assessment of potential indoor air impacts was warranted (SV-3 30 Tozer, see **Figure 4**). Based on these detections in groundwater and subsurface soil vapor, Shaw installed one soil vapor monitoring point (SV-4 30 Tozer) inside the building located at the 30 Tozer Road property on May 11, 2012. Installation of soil vapor point SV-4 30 Tozer consisted of coring a hole through the concrete floor slab and driving a three quarter inch diameter metal probe using hand tools to a depth of approximately 1.5 feet below the floor. The annular space around the soil vapor point was sealed to prevent short circuiting and was finished with a flush-mounted road

box. The location of the soil vapor point inside the 30 Tozer Road building (SV-4 30 Tozer) is shown on **Figure 4**.

One sub-slab soil vapor sample was collected from beneath the 30 Tozer Road building at SV-4 30 Tozer on May 16, 2012 using an evacuated Summa<sup>®</sup> canister over a period of approximately two hours. This sample was submitted to ALS Environmental (ALS, formerly known as Columbia Analytical Services, Inc.) for analysis of VOCs by Environmental Protection Agency (EPA) Method TO-15. A complete copy of the Laboratory analytical report is included in **Appendix B**. Analytical results of the sub-surface vapor samples collected outside and inside the 30 Tozer Road building are summarized in **Table 3** along with results from outside the building. Results of VOC analysis have been compared to Commercial/Industrial Sub-Slab Soil Gas Screening Values from the MADEP Interim Final Vapor Intrusion Guidance (WSC#-11-435; MADEP, 2011). As indicated in **Table 3**, TCE was detected in the sub-slab soil vapor sample collected from SV-4 30 Tozer in May 2012 at a concentration of 3,300 micrograms per meter cubed ( $\text{ug}/\text{m}^3$ ) compared to a screening value of 140  $\text{ug}/\text{m}^3$  and PCE was reported at a concentration of 1,100  $\text{ug}/\text{m}^3$  versus a screening level of 290  $\text{ug}/\text{m}^3$ . These results indicate additional evaluation of potential indoor air exposure at 30 Tozer Road is warranted and is further discussed in Section 4.5.1.

### **2.3.2 Groundwater Sampling at 39 Tozer Road**

Groundwater analytical results from first two sampling events in 2011 at OB41-S, located approximately 30 feet from the north end of the 39 Tozer Road building (**Figure 2**), indicated concentrations below GW-2 standards for detected VOCs except TCE. TCE was detected at a concentration of 0.12 milligrams per liter (mg/L) in October 2011, which is above the GW-2 standard of 0.030 mg/L. Another groundwater sample was collected from OB41-S in April 2012 and submitted to ALS Environmental for analysis of VOCs by EPA Method 8260B. Analytical results are summarized and compared to MCP GW-2 Method 1 standards in **Table 4**. The detected concentrations of TCE in groundwater samples collected from OB41-S were 0.26 mg/l in April 2011, 0.12 mg/l in October 2011 and 0.069 mg/l in April 2012 versus a GW-2 standard of 0.03 mg/l. Although these results suggest a decreasing trend, the April 2012 TCE concentration remains above the GW-2 standard. Therefore, consistent with MADEP policy (MADEP, 2011), additional evaluation of potential indoor air exposure at 39 Tozer Road is warranted and is further discussed in Section 4.5.2.

## **2.4 Monitoring of Groundwater Physical Parameters**

The Phase IV Plan detailed monitoring activities for the various permanganate treatment areas of the Site. As discussed in previous monitoring reports, monitoring activities have been adjusted, based upon changing site conditions. Groundwater physical parameters were monitored biweekly during permanganate injection in select monitoring wells in active treatment areas. Monitoring activities typically completed for the permanganate treatment program include:

- visual observation of groundwater color for identification of residual permanganate;
- depth-to-groundwater measurements; and
- measurement of oxidation-reduction potential (ORP), and pH using a down-well water parameter probe (if no residual permanganate is observed, which could damage the probe).



Groundwater monitoring completed as part of the bioremediation program was conducted concurrently with sampling events and included measurement of ORP, dissolved oxygen (DO), pH, and conductivity.

Results of water quality parameter measurements collected from monitoring wells during this reporting period are presented in **Appendix C**.

Depth to groundwater measurements (**Appendix C**) collected during the April 2012 sampling event were used to develop groundwater contour maps for the shallow overburden, deep overburden, and bedrock aquifers (**Figures 5, 6, and 7**). These figures show that the majority of Site groundwater in each aquifer generally flows to the west/southwest, following the regional groundwater flow pattern, which is south and west toward Shoe Pond and the Bass River. The gradient in each aquifer is moderate to steep east of Tozer Road and very flat to the west of Tozer Road. There are indications of limited northerly groundwater flow in the contours at the northern end of the Site. Overall, the groundwater gradients shown on these figures are consistent with historical data from the Site.

## **2.5 Groundwater and Surface Water Sampling**

### **2.5.1 Sample Collection and Analysis**

Groundwater sampling to monitor the progress of both the permanganate and bioremediation programs was conducted in April 2012 and August 2012 during this reporting period. The April 2012 sampling event monitored VOC trends and groundwater conditions at select wells across the Site. The August 2012 sampling event was a more limited scope focused on monitoring bioremediation progress following the July 2012 injection of EVO. A summary of samples collected during these monitoring events and sampling rationale is provided on **Tables 5A and 5B**. These sampling events also included select stream surface water locations previously requested by the Beverly Conservation Commission in various Orders of Condition (Beverly, 2002; 2003; 2004). Sampling locations are shown on **Figure 2**.

Groundwater VOC sampling of monitoring and application wells during this reporting period utilized passive diffusion bag (PDB) samplers, with the exception of stream monitoring points and certain wells where alternative sampling methods were used, as discussed below. For wells sampled utilizing the PDB method, the sampling apparatus was deployed in each groundwater monitoring well for a minimum two-week equilibration period, after which the samples were collected.

Depth-to-groundwater, total-well-depth measurements, and gauging for potential dense non-aqueous phase liquid (DNAPL) at selected wells were performed when the PDB samplers were deployed. The electronic interface probe used during these monitoring activities did not detect DNAPL at monitoring wells gauged during this reporting period. Water level monitoring data from the April 2012 and August 2012 sampling events are summarized in **Appendix C**.

Monitoring wells BR-1, BR-3, BR-5, BR-6, BR-7, CL8-BR and CL9-BR are bedrock wells utilizing a packer system in order to provide discrete groundwater sampling from three separate fracture zones. These wells use a Waterloo™ system, which collects groundwater samples in each packer zone by using dedicated dual-valve pumps driven by compressed nitrogen. Surface water stream samples were collected directly from the sample locations with a bailer or laboratory-supplied containers.

At locations where analyses of dissolved metals (manganese and/or iron) and chloride were performed, samples were collected using a conventional bailer, since these constituents cannot be accurately assessed using PDB samplers. Dissolved manganese and iron samples were field-filtered using a 0.45-micron filter prior to analysis consistent with MADEP policy.

Groundwater and surface water samples were submitted to ALS Environmental for analysis of VOCs (by EPA Method 8260B), dissolved iron and manganese, methane, ethane, ethene, metabolic acids (in April 2012), total organic carbon (in August 2012), and chloride as outlined on **Tables 5A** and **5B**. Additionally, groundwater samples collected from select bioremediation wells were submitted for analysis of *Dehalococcoides sp.* bacteria (DHC) at Shaw's Technology Development Laboratory in Knoxville, Tennessee.

During the April 2012 sampling event, groundwater samples from select injection and monitoring wells were also collected for bench-top colorimetric permanganate concentration analysis. These groundwater samples were field filtered using a 0.45-micron filter prior to permanganate concentration analysis. Samples that were collected for colorimetric analysis of residual permanganate were analyzed by Shaw using a Hach DR/890 colorimeter. The colorimeter utilizes a spectrophotometric method to determine the permanganate concentration based on a permanganate color calibration standard.

VOC analytical results from the April and August 2012 sampling events are summarized on **Table 6**. Results of chloride, iron, and manganese samples collected during the sampling events are summarized on **Table 7**. Results of bioremediation parameter analysis (i.e., methane, ethane, ethene, total organic carbon, and DHC bacteria) are summarized on **Table 8**. Complete laboratory analytical reports for samples collected in April 2012 and August 2012 are provided in **Appendix B**. Results of bench-top colorimetric analysis of residual permanganate are included in **Table 9**. Sampling results are discussed below.

### **2.5.2 Quality Assurance/Quality Control (QA/QC)**

In general, the environmental data collected by Shaw during these remedial monitoring activities meets the "presumptive certainty" criteria described in MADEP guidance (MADEP, 2004a). Based on a data usability assessment of the laboratory analytical reports, the data are appropriate for use in this ROS report. The laboratory reports were reviewed by Shaw to determine if samples were analyzed within holding times and to ensure that surrogate recoveries and internal laboratory standards were within QA/QC limits. Copies of Data Usability Worksheets that document this review are included with each laboratory analytical report in **Appendix B**. If applicable, results from samples reported beyond the calibration range of the laboratory instrument are flagged with an "E" (estimated) qualifier in the laboratory analytical report and associated data tables in this report. However, these samples were reanalyzed by the laboratory as a secondary diluted sample. A "D" (diluted) qualifier in the laboratory analytical report and on the data tables indicates compounds that are reported from a secondary diluted sample.

QA/QC issues identified during this reporting period included continuing calibration criteria in ALS Environmental laboratory submission number R1202267. The continuing calibration criteria were met for all analytes except for the following: 1,2-dichloroethane, carbon tetrachloride, and cis-1,3-dichloropropene. Positive results associated with these compounds in submission number R1202267

should be considered as estimated; however, since no positive detections were reported, the data were not affected.

In summary, no data collected during this reporting period were rejected and the data generally meet the QA/QC requirements of the MCP.

### **2.5.3 VOC Monitoring Results**

In general, the analytical results of groundwater samples collected during the April and August 2012 sampling events (**Table 6**) show decreasing or consistent concentrations of TCE and PCE monitoring wells across the Site. However, concentrations of cis-1,2-DCE have been more variable. This variability may be due to the higher mobility of cis-1,2-DCE in groundwater compared to TCE and PCE and the generation of this daughter compound during natural attenuation or bioremediation processes.

Graphs illustrating concentration trends over time for TCE, PCE, cis-1,2-DCE, TCA, and vinyl chloride for numerous injection and monitoring wells are provided in **Appendix D**. Graphs for shallow overburden, deep overburden, and bedrock monitoring wells that are located in proximity to each other are grouped together for comparative purposes. These graphs indicate that data from many of the wells monitored continue to show decreasing concentration trends or sustained reductions in VOC concentrations as a result of Varian's remedial activities. These trends indicate that the remedial program is effectively treating groundwater and the Site is progressing toward a Permanent Solution as defined by the MCP.

Analytical results of target VOCs from the April 2012 groundwater sampling event were used to generate VOC iso-concentration maps for the shallow overburden, deep overburden, and bedrock aquifers (**Figures 8, 9, and 10**, respectively). The "total" VOC numbers consider only concentrations of the Site-related VOCs, which include TCE, PCE, TCA, cis- and trans-DCE, 1,1-dichloroethane (DCA), 1,1-DCE, 1,2-DCA, and vinyl chloride.

Recent groundwater sampling results support the following overall observations regarding the three aquifers present at the Site:

- In the shallow overburden aquifer (**Figure 8**), the April 2012 data demonstrate that there were no wells with a total VOC concentration greater than 10 mg/L. Prior to the start of permanganate injection at the Site in 2002, the area of VOC concentrations greater than 10 mg/L extended over an area from OB9-S by the Unnamed Stream west to AP12-S, located adjacent to the east side of Building 6. A second area of shallow VOCs greater than 10 mg/L was historically observed at AP14-S, adjacent to the north side of Building 3 (Shaw, 2002a). **Figure 8** indicates two isolated areas of total VOCs greater than 1 mg/L now exist in the shallow overburden: in the area of OB15-S, BW-8 and MW-8, by the Unnamed Stream, and a second area that includes OB42-S located northeast of the building at 30 Tozer Road and extends to include GZ-1 and GZ-4 west of Tozer Road.
- In the deep overburden aquifer (**Figure 9**), the April 2012 data demonstrate the area of total VOC concentrations greater than 100 mg/L is limited to beneath Buildings 3 and 6. Prior to the start of permanganate injection at the Site, the area of the deep overburden plume with VOC concentrations greater than 100 mg/L extended significantly further to the west, downgradient from Buildings 3 and 6 to the area just west of Building 7 (Shaw, 2002a). Pretreatment total VOC levels in the Building 5 source area were also greater than 100 mg/L.

However, by January 2006, the total VOC concentrations in the Building 5 area had been reduced through permanganate treatment to approximately 25 mg/L at OB35-DO in April 2012. Total VOC levels in the PSL 10 area to the south of the former Varian facility have been reduced from a concentration greater than 50 mg/L before treatment began in 2002 and have remained reduced during the April 2012 sampling round (1.03 mg/L at AP-19). However to the west of PSL 10, an elevated total VOC concentration (15.81 mg/L) was noted in well MW2-32Tozer, at the 32 Tozer Road property.

- Before treatment started in the bedrock aquifer in 2002, total VOC concentrations greater than 50 mg/L extended from the Building 3 and 9 areas west nearly to Tozer Road (Shaw, 2002a). The April 2012 data document reduced bedrock levels with total VOC concentrations greater than 10 mg/L, but still less than 50 mg/L beneath and to the west of Building 3 and 6 source areas (**Figure 10**). Pretreatment total VOC concentrations in bedrock along Tozer Road were as high as 10 mg/L. Analytical results from April 2012 indicate that total VOC concentrations in this area along Tozer Road have now been reduced to about 1 mg/L.

In summary, recent groundwater sampling results as shown on **Figures 8, 9, and 10** continue to demonstrate decreases in the concentrations and extent of VOCs in each aquifer. A more detailed discussion of VOC results for the various treatment areas at the Site is presented below.

#### **North of Route 128**

Historically, VOC concentrations in the area north of Route 128 have been low or non-detect in the shallow and deep overburden aquifers. Impacts have been noted in the bedrock aquifer north of Route 128. Permanganate injection has not been performed directly in this area, but source area treatment south of Route 128 was conducted to address downgradient impacts north of the former Varian facility. The groundwater sampling results for the area north of Route 128 demonstrate that:

- At bedrock monitoring well BR-1, a multi-zone bedrock well on Walden Street, VOC concentrations in the shallowest zone (Zone 3) continued to remain non-detect in April 2012. Low concentrations of VOC were present in the deepest sampling zone (Zone 1) and the middle sampling zone (Zone 2) in October 2011, but analytes decreased to non-detect in April 2012.
- At the bedrock well CL9-BR, a multi-zone bedrock well located just north of Route 128 and west of Tozer Road, TCE and PCE concentrations have remained generally consistent, but levels of cis-1,2-DCE continue to fluctuate. The significant fluctuations in cis-1,2-DCE concentrations, a TCE breakdown compound, suggest that some biological breakdown of TCE and/or PCE may be occurring in bedrock in this area.
- At the deep overburden and bedrock well couplet OB17-DO/BR, located on Commons Drive, the April 2012 groundwater sample results continue to indicate an overall decreasing trend in VOC concentrations.
- At bedrock well CL02-BR, TCE and PCE concentrations have remained non-detect since October of 2009, but a low concentration of TCE was detected in April 2012 (0.011 mg/L). Daughter products at CL02-BR continue to show fluctuating concentrations (cis-1,2-DCE was detected at 0.2 mg/l in April 2012).

### **Building 3/6 Treatment Areas**

Permanganate injection was conducted during this reporting period at wells AP12-BR, AP26-DO, OB12-DO, OB27-BR and OB25-BR in the Building 3/6 treatment area as presented in Section 2.1. In addition, bioremediation has continued in the shallow overburden near the Unnamed Stream during this reporting period. Significant target VOC reductions had been maintained at a number of monitoring wells, including AP14-S, AP25-DO, MW-9, MW-9A, OB9-S, OB9-DO, OB10-S, OB19-DO, and OB32-DO. TCE concentrations at these wells have been reduced by as much as 99 percent from historical highs. Groundwater sampling results for this area are summarized below:

- At shallow well OB9-S, located adjacent to the Unnamed Stream, TCE and PCE have decreased from pre-treatment concentrations over 50 mg/L to non-detect in January and August 2012. Low concentrations of the breakdown products were also detected in January and April 2012. EVO injections were conducted in July 2012 to ensure continued breakdown of VOC daughter products and chloroethane (a TCA breakdown product) decreased from 0.27 mg/L in April 2012 to 0.0059 mg/L in August 2012.
- At deep overburden well OB9-DO, TCE and PCE concentrations decreased to non-detect in January 2012 and remained non-detect in April and August 2012. At bedrock well OB9-BR, TCE and PCE levels show an overall decrease since the start of treatment and were non-detect in October 2011 and January 2012. However concentrations of TCE and PCE increased in April 2012, but remained below pre-treatment concentrations. TCE and PCE concentrations remained at a similar level in August 2012 (2.1 mg/L and 1.6 mg/L, respectively). At both OB9-DO and OB9-BR, concentrations of breakdown products vinyl chloride and cis-1,2-DCE exhibit fluctuating levels over recent sampling events. These fluctuations are likely the result of bioremediation.
- In shallow overburden BW wells, adjacent to the Unnamed Stream east of Building 3, EVO application was conducted during this reporting period to continue reductive dechlorination. Sampling results from April and August 2012 indicate the presence of degradation products cis-1,2-DCE, vinyl chloride and ethene at wells BW-4, BW-5, BW-6, BW-8 and BW-9, indicating that complete breakdown of TCE and PCE is continuing in the shallow overburden in this areas. At wells BW-8 and BW-9, decreases in the detected concentrations of 1,1,1-TCA, 1,1-dichloroethane and chloroethane between April and August 2012, along with the presence of ethane, indicate that complete degradation of 1,1,1-TCA is occurring in the shallow overburden in this areas.
- At deep overburden well OB12-DO, located north of Building 3, significant VOC concentration reductions were observed following the 2009 permanganate injections (e.g. 99 percent reduction in TCE). However, concentrations of TCE have rebounded following several permanganate treatment events. Most recently, concentrations of TCE and PCE decreased to non-detect in July 2011 after permanganate injections conducted summer of 2011. TCE concentrations then increased to 37 mg/L in April 2012, once permanganate in the area of OB12-DO was consumed. This concentration represents an approximate 70 percent reduction from the highest detected TCE concentration at OB12-DO, but the April 2012 VOC concentrations were above the remedial planning criteria and further treatment was determined to be warranted. Permanganate injections were conducted at OB12-DO during the 2012 treatment period and groundwater sample results from October 2012 will be evaluated to assess if additional treatment is warranted.
- At shallow well OB15-S, adjacent to the Unnamed Stream east of Building 3, PCE and TCE concentrations have decreased significantly since January 2009, when they were 6.1 mg/L and 4.3 mg/L, respectively. In April 2012, PCE and TCE remained non-detect. Breakdown products cis-1,2-DCE and vinyl chloride are present and EVO injections were conducted in

- July 2012 to enhance further dechlorination. In August 2012, PCE and TCE remained non-detect and daughter products showed a decrease. For example, cis-1,2-DCE decreased from 1.4 mg/L in April 2012 to 0.024 mg/L in August 2012.
- At deep overburden well OB19-DO, located just west of Building 1, concentrations have been relatively consistent since the order of magnitude decrease in TCE and PCE was observed in July 2010. Concentrations of TCE and PCE were 3.1 mg/L and 0.8 mg/L, respectively, at this well in April 2012.
  - At bedrock well OB25-BR, located west of Building 1, the concentrations of cis-1,2-DCE and vinyl chloride detected in April 2009 increased and remained elevated in July and October 2010. Because the detected concentration of cis-1,2-DCE at this well was above the remedial planning criterion (67 mg/L in October 2010), permanganate treatment was conducted at OB25-BR in January and February 2011. In response to this treatment, concentrations of VOC reduced to non-detect in April 2011. VOC concentrations increased at OB25-BR as the permanganate was consumed by VOC destruction and in April 2012, the cis-1,2-DCE concentration was 30 mg/L, above remedial planning criteria. Permanganate injections were conducted at OB25-BR during the 2012 treatment period and groundwater sample results from October 2012 will be evaluated to assess if additional treatment is warranted.
  - Bedrock well OB27-BR, located near the south west corner of Building 7, received permanganate injection in 2010 and early 2011 to address increased concentrations of VOCs. As a result of this treatment, TCE, PCE, and cis-1,2-DCE concentrations were reduced significantly in April 2010, were non-detect in October 2010, and only indicated a low concentration of PCE in April 2011 (0.0026 mg/L). In October 2011, VOC concentrations showed an increase with PCE detected at 7.4 mg/L and TCE present at 22 mg/L, both similar to historic high levels. The TCE concentration remained similar in April 2012 (20 mg/L) and therefore it was determined that further treatment was warranted. Permanganate injections were conducted at OB27-BR during the 2012 treatment period and groundwater sample results from October 2012 will be evaluated to assess if additional treatment is warranted.
  - Deep overburden well OB34-DO, located just north of Building 3, last received permanganate treatment in August 2009. Although permanganate addition was not conducted in 2010, the TCE concentrations decreased at this well in October 2010 and remained relatively low in April 2011, suggesting that benefits of permanganate injections at nearby wells AP30R-DO, AP31-DO and AP32-DO were being observed in the area of OB34-DO. In October 2011, the TCE concentration increased to 11 mg/L, but remained below the remedial planning criteria. The TCE concentration decreased slightly in April 2012 to 8.5 mg/L. Groundwater sample results from October 2012 will be evaluated to assess if the benefits of treatment are still being observed at OB34-DO.
  - Deep overburden well OB36-DO, located beneath the Building 6 loading dock, last received permanganate treatment in 2005. VOC concentrations at this well have been relatively consistent over recent sampling events with TCE detected at 10 mg/L in April 2012. This represents an approximate 90 percent reduction from the historic TCE concentration at OB36-DO. Since April 2008, with the exception of October 2009, VOC levels at OB36-DO have remained below the remedial planning criteria and it appears that additional treatment at this well is not warranted at this time.
  - At deep overburden well AP12-DO, located near the south east corner of Building 6, permanganate treatment was conducted in 2004 and TCE concentrations remained non-detect until residual permanganate from treatment in the Building 6 area was consumed and an increase was observed in April 2010. Although the concentrations of TCE and PCE at

- AP12-DO were higher, they remained below the remedial planning criteria until October 2011, when the TCE concentration increased to 27 mg/L. The TCE concentration increased further in April 2012, to 39 mg/L. This TCE level suggested that further treatment was warranted and permanganate injections were conducted at AP12-DO during the 2012 treatment period. Groundwater sample results from October 2012 will be evaluated to assess if additional treatment is warranted.
- At deep overburden well AP13-DO, located at the northeast corner of Building 3, bioremediation has reduced but not been successful in maintaining lower VOC concentrations in groundwater. TCE and PCE concentrations increased in October 2011 and again in January 2012 as the lactate was consumed by biologic activity. In April 2012, the TCE concentration at AP13-DO was 320 mg/L and the PCE level was 59 mg/L. These levels are well above the remedial planning criteria, indicating that further treatment is warranted. Additional bioremediation in this area has been postponed to assess the possible implementation of a permanganate re-circulating system to treat deep impacts below Building 3.
  - At deep overburden well AP23-DO, located adjacent to Building 3, bioremediation has been able to reduce VOC concentrations, but these decreases have not been maintained. Following the 2011 treatment program, TCE and PCE concentrations increased in October 2011 and in January 2012 as the lactate was consumed by biologic activity. In April 2012, the TCE concentration at AP23-DO was 350 mg/L and the PCE level 21 mg/L. The TCE concentration is well above the remedial planning criteria, indicating that further treatment is warranted. Further bioremediation in this area has been postponed to assess potential implementation of a permanganate re-circulating system to treat deep impacts below Building 3.
  - At deep overburden well AP24-DO, located adjacent to Building 3, bioremediation has been more successful at reducing VOC concentrations. For example, the concentration of TCE at this well decreased from 300 mg/L in April 2011 to 16 mg/L in July 2011, after additional lactate injection. However, as with other deep overburden wells in this area, once the lactate at in the area was consumed, VOC concentrations increased and in April 2012 the TCE concentration was 240 mg/L. The TCE level is well above the remedial planning criteria, indicating that further treatment is warranted. Further bioremediation in this area has been postponed to assess the potential implementation of a permanganate re-circulating system to treat deep impacts below Building 3.
  - Deep overburden well AP26-DO, located west of Building 2, last received permanganate treatment in 2004. Concentrations of VOCs at this well have fluctuated over recent sampling events, with the level of TCE detected near the remedial planning criteria. In April 2012, the concentration of TCE was 27 mg/L and the level of PCE was 11 mg/L. It was expected that the permanganate injections conducted in summer 2011 in the upgradient Building 3 source area (e.g. AP30R-DO) would reduce VOC levels in the area of AP26-DO. The April 2012 results indicate that this benefit has not been observed. Therefore, permanganate injections were conducted at AP26-DO during the 2012 treatment period. Groundwater sample results from October 2012 will be evaluated to assess if additional treatment is warranted.
  - Deep overburden wells AP30R-DO, AP31-DO and AP32-DO, located just north of Building 3, responded well to the permanganate treatment conducted in 2010 and 2011. Concentrations of TCE and PCE at AP30R-DO have decreased from 680 mg/L and 59 mg/L, respectively to non-detect in November 2011 and remained non-detect in April 2012. Residual permanganate continues to be present at this location. Concentrations of TCE in AP31-DO decreased from a pretreatment concentration of 940 mg/L to non-detect in November 2011 and PCE decreased from 71 mg/L in February 2010 to 0.043 mg/L in November 2011. However, as

permanganate has been consumed by VOC destruction, the concentrations have increased in AP31-DO. For example in April 2012 TCE was detected at 43 mg/L and PCE was present at 1.9 mg/L. Concentrations of VOCs exhibited a significant decrease after treatment in AP32-DO, for example TCE decreased from 950 mg/L pre-treatment concentration to 0.15 mg/L in April 2011. However, as permanganate in the area has been consumed, TCE increased and was detected at 140 mg/L in April 2012. The concentrations of TCE at AP31-DO and AP32-DO are above the remedial planning criteria, indicating that further treatment is warranted. Implementation of a permanganate re-circulating system to treat deep impacts below Building 3 is being evaluated.

- Deep overburden well MW-13, located north of Building 3 adjacent to Route 128, received permanganate injections in 2010 and early 2011. Significant reductions in PCE and TCE were observed in April 2010 in response to the permanganate treatment. These reductions were maintained in April 2011, when the TCE concentration was 0.0075 mg/L and the PCE concentration was 0.062 mg/L. Data showed continued lower VOC concentrations, with TCE non-detect in April 2012. TCE and PCE concentrations reflect a greater than 99 percent reduction from the levels detected in April 2009.
- In the stream adjacent to Building 9, the Unnamed Stream sample location indicated fluctuating concentrations of VOCs. This is expected due to the continuing bioremediation being conducted in the adjacent shallow groundwater aquifer. Just downstream at the STR-3 stream sample location, TCE and PCE were below detection limits for the six sampling events from July 2010 to October 2011. Low concentrations of PCE and TCE were detected at STR-3 in January 2012 (0.011 and 0.02 mg/L, respectively). Concentrations returned to non-detect in April 2012 and August 2012. The non-detect and low levels of VOCs detected at STR-3 indicate that fluctuations in surface water VOC concentrations are limited to the area immediately adjacent to the active bioremediation treatment zone. The continued presence of ethene in adjacent shallow well samples indicates that complete VOC degradation is occurring.

### **Building 5 Treatment Area**

Permanganate application in the Building 5 treatment area was conducted at well AP27-DO in 2004 and 2005, and at OB-35DO from 2005 to 2008, in 2011 and in 2012. The most recent groundwater sampling results for this area demonstrates that:

- VOC concentrations at well AP27-DO remain below prior concentrations and the remedial planning criteria, suggesting additional treatment is not warranted. In April 2012, TCE and PCE were detected at 13 mg/L and non-detect, respectively.
- The PCE concentration at well OB35-DO increased in October 2010 to 34 mg/L and remained similar in April 2011 (32 mg/L), which is above the baseline concentration. Additional treatment was conducted during the summer 2011 treatment period. October 2011 analytical results showed a slight decrease in concentrations of PCE to 29 mg/L and in April 2012, the PCE concentrations decreased but remained above baseline (19 mg/L vs. 3 mg/L). The concentration of TCE at OB35-DO was 5.4 mg/L in April 2012, reflecting reduction from 440 mg/L in May 2005. Permanganate treatment was conducted during the 2012 treatment period to reduce PCE concentrations and groundwater sample results from October 2012 will be evaluated to assess if additional treatment is warranted.
- TCE and PCE concentrations at deep overburden well OB38-DO, located on the east side of Building 5, have been relatively consistent over recent sampling events. In April 2012, TCE was detected at 0.46 mg/L and PCE was present at 0.47 mg/L. The detected VOCs at this well are below prior concentrations and the remedial planning criteria.



### **PSL 10 Treatment Area**

This area is located to the south of the main buildings, adjacent to the 32 Tozer Road property. Permanganate injection was conducted in this area from 2002 to 2004 and 2006 through 2008. Additional permanganate injections were conducted in this area at wells AP-19 and AP-22 during the summer 2011 treatment period. The most recent groundwater sampling results for this area demonstrate that:

- VOC concentrations at shallow overburden well CL10-S, located just downgradient of PSL 10 on the 32 Tozer Road property, continued to exhibit seasonal fluctuations. For example, in October 2011, concentrations of PCE decreased to 0.045 mg/L from 0.87 mg/L in April 2011. Then, in April 2012, the concentration of PCE increased to 0.13 mg/L. Over recent years, the magnitude of the increases observed in April have generally decreased.
- VOC levels were non-detect in April 2012 at deep overburden well CL10-DO and decreased to non-detect at bedrock well CL10-BR.
- Concentrations of VOCs at wells AP-19, AP-20, AP-21, and AP-22 responded well to the permanganate treatment completed through 2008. Based on increased VOC concentrations above baseline levels in April 2011 and to provide additional benefits to the downgradient areas at 32 Tozer Road, additional treatment was conducted in this area during the summer of 2011. In April 2012, concentrations of TCE and PCE in groundwater remained non-detect at AP-21 and AP-22. Concentrations of PCE and TCE in AP-19 and AP-20 continue to fluctuate but are below historic high concentrations. For example, TCE was detected at 0.1 mg/L at AP-20 in April 2012 versus a high of 1.6 mg/L in June 2002.
- Concentrations of VOCs at deep overburden monitoring well MW2-32Tozer, located west of AP-21 and AP-22 on the 32 Tozer Road property, have been generally consistent over the three sampling events conducted at this well. PCE has been detected at the highest concentrations at MW2-32Tozer over the three sampling events and was present at 12 mg/L in April 2012. This concentration is comparable to the levels observed at deep overburden well CL10-DO prior to the start of treatment in PSL 10 (e.g. PCE was present at 9.2 mg/L in May 2003). VOC concentrations detected at deep overburden wells MW1-32Tozer and MW3-32Tozer are lower compared to MW2-32Tozer. For example, to the northwest, at MW1-32Tozer, the PCE concentration was 0.0067 mg/L in April 2012 and to the southwest, at MW3-32Tozer, the PCE level was non-detect in April 2012. The three shallow wells downgradient of the building at 32 Tozer Road (OB24-S, MW4-32Tozer and MW5-32Tozer) have generally indicated low to non-detect VOC concentrations. For example, VOCs were non-detect at OB24-S in April 2012 and the highest VOC concentration detected at MW5-32Tozer was TCE at a concentration of 0.019 mg/L.

### **Tozer Road Treatment Area South of 128**

No permanganate injections have been performed at 28 Tozer Road since 2006. The most recent groundwater sampling results for this area demonstrate that:

- VOCs concentrations at wells OB5-S (27 Tozer Road) have exhibited a decreasing trend since April 2007 and in April 2012 only indicated a low concentration of TCE (0.0024 mg/L) above the reporting limits. At the adjacent deep overburden well OB5-DO, VOC concentrations increased until April 2011, but showed a slight decrease in both October 2011 and April 2012. For example, the concentration of TCE decreased from 3 mg/L in April 2011 to 1.8 mg/L in April 2012. At bedrock well OB5-BR, TCE and PCE concentrations have

- generally been non-detect since 2004 and the concentration of cis-1,2-DCE has decreased from 1.2 mg/l in April 2010 to 0.0069 mg/L in April 2012.
- Well OB43-S was installed at 27 Tozer to assess compliance with GW-2 standards at this property. VOC results at this well were non-detect in April 2012.
  - At deep overburden monitoring well OB6-DO, located 300 feet west of Tozer Road at Sonning Road, the TCE, PCE and cis-1,2-DCE concentrations have fluctuated over recent events. The frequency of the variations in VOC concentrations at this well suggest seasonal fluctuations. VOC concentrations at OB6-BR have been generally consistent over recent sampling events, but overall exhibit a decreasing trend.
  - At shallow monitoring well W-1, located at 30 Tozer Road, VOCs remained had been relatively stable at low concentrations over recent sampling events, but increased in April 2012. For example, the TCE increased from 0.0066 mg/L in October 2011 to 1 mg/L in April 2012.
  - Well OB42-S was installed at 30 Tozer just downgradient of W-1 to assess compliance with GW-2 standards at this property. VOC results from this well in April 2012 indicate the presence of TCE, PCE, and cis-1,2-DCE at concentrations of 2.4 mg/L, 0.078 mg/L and 0.94 mg/L, respectively. These concentrations are generally consistent with the level observed in the previous two sampling events in April 2011 and October 2011 at OB42-S.
  - At deep overburden well CL3-DO, located at 28 Tozer Road, detected concentrations of VOCs had been generally low since 2009, until April 2012, when TCE and PCE concentrations showed an increase. TCE increased from 0.0089 mg/L in October 2011 to 15 mg/L in April 2012 and the PCE increased from non-detect to a concentration of 6 mg/L. The concentrations of TCE and PCE remain below remedial criteria, but the October 2012 groundwater sampling results from this well will be reviewed to determine if any further response actions are needed. VOC results at the adjacent shallow well CL3-S remained consistent at low concentrations in April 2012 (e.g. TCE was detected at 0.0075 mg/L).
  - BR-5 is a multi-zone bedrock well located at 28 Tozer Road. The VOC concentrations in the middle sample interval (Zone 2) and the deepest sample interval (Zone 1) at this well illustrate a general decreasing trend since the start of treatment in 2002. In the shallowest sample interval (Zone 3), VOCs concentrations indicated an overall decreasing trend until the April 2011 sampling event, when an increase was observed. The most significant increase in Zone 3 was the concentration of cis-1,2-DCE, which increased from 0.18 mg/L to 5 mg/L. Several detected VOCs decreased in April 2012, most notably the concentration of cis-1,2-DCE, which decreased from 5 mg/L to 0.83 mg/L.

### **31 Tozer Road Treatment Area**

Shallow groundwater treatment was conducted in 2002 and 2003 and deep overburden permanganate injection occurred in this area in 2004. The most recent groundwater sampling results for this area demonstrates that:

- Several wells are monitored at 31 Tozer Road to assess shallow overburden impacts. Concentrations of VOCs in AP15-S continued to remain non-detect in April 2012. VOCs continue to remain low in April 2012 at OB18-S, where TCE was detected at a concentration of 0.0049 mg/L and PCE was non-detect. At shallow well GZ-4, concentrations of TCE and PCE are fluctuating. The concentrations of TCE and PCE detected at GZ-4 in April 2012 were 0.84 mg/L and 0.14 mg/L, respectively, and exhibited an increase compared to the last sampling event in October 2011.

- In deep overburden well OB18-DO, located at 31 Tozer Road, the TCE and PCE concentrations have fluctuated since April 2010, but the range of the fluctuation has been relatively small. For example, the concentration of TCE has ranged from a high of 0.7 mg/L in April 2010 to low of 0.16 mg/L in October 2011. At OB8-DO, located at 39 Tozer Road, levels of VOC have remained relatively consistent for several years. In April 2012, TCE and PCE were detected at concentrations of 2.5 mg/L and 0.37 mg/L, respectively.
- Shallow well OB8-S, located at 39 Tozer Road, was also sampled to assess shallow overburden impacts. VOC concentrations at this well have been relatively consistent over a number of years, with the TCE present at 0.28 mg/L and cis-1,2-DCE present at 0.1 mg/L in April 2012.
- Well OB41-S was installed at 39 Tozer just downgradient of OB8-S to assess compliance with GW-2 standards at this property. VOC results from OB41-S in April 2012 indicate VOC concentrations that are lower than the concentration noted at OB8-S. For example, TCE was detected at OB41-S at 0.069 mg/L compared to 0.28 mg/L for this compound at OB8-S.
- Stream points STRHA-7A (Stream A on the 39 Tozer Road property) and STRHA-7B (Unnamed Stream on the 39 Tozer Road property) are sampled to monitor VOC impacts to surface water. Detected VOC concentrations at these sample points continue to fluctuate, but remain relatively low. For example, TCE was detected at a concentration of 0.03 mg/L at STRHA-7A and 0.019 mg/L at STRHA-7B in April 2012.

### ***Longview/Hill Street Treatment Area***

In the Longview/Hill Street area, permanganate injections were conducted at wells AP3-DO and AP4-DO during 2004, and at AP3-DO and AP3-BR in 2005. The most recent groundwater sampling results for this area demonstrate that:

- Several monitoring wells in this area of the site are sampled to assess shallow overburden impacts. These include well P-11R on Longview Terrace, P-19A on Hill Street just south of Longview Road, P-20R east of Longview Terrace, and OB20-S by Stream A, south of Sonning Road. VOCs remained non-detect at shallow wells P-11R, P-20R and OB20-S in April 2012. At well P-19A, concentrations of PCE, TCE, and cis-1,2-DCE have remained relatively consistent and at low levels, with cis-1,2-DCE detected at the highest concentration (0.29 mg/L in April 2012).
- Concentrations of VOCs in deep overburden wells OB20-DO and OB21-DO have been generally consistent over the last few years. Along the western edge of the plume at OB20-DO, the concentration of cis-1,2-DCE has typically been higher (0.47 mg/L in October 2011), but VOCs decreased to non-detect in April 2012. At OB21-DO, the level of TCE detected continues to be generally higher (1 mg/L in April 2012).
- For a number of years, the concentrations of VOCs detected in bedrock well OB20-BR had typically been below detection limits, except 1,1-dichloroethane. However, since October 2010, the concentration of 1,1-dichloroethane has been non-detect and low concentrations of other VOCs have been present. For example, in April 2012, TCE was detected at a concentration of 0.024 mg/L and cis-1,2-DCE was present at 0.19 mg/L. VOC concentrations detected at bedrock well OB21-BR have been generally consistent over recent sampling events, with cis-1,2-DCE typically detected at the highest concentrations (1.5 mg/L in October 2011). However, in April 2012, VOCs at OB21-BR were non-detect with the exception of cis-1,2-DCE, which was detected at a concentration of 0.49 mg/L.

- Concentrations of TCE and PCE have been non-detect in the three sampling zones at bedrock monitoring well BR-6, located at the east end of Hill Street, since 2009. As indicated by the VOC graph for each zone, the detected concentrations of cis-1,2-DCE have fluctuated in each zone at BR-6, but generally indicate a decreasing overall trend. Cis-1,2-DCE in April 2012 was detected at a concentration of 0.0035 mg/L in the deepest zone (Zone 1) and at a concentration of 0.019 mg/L in middle zone (Zone 2).
- At stream monitoring point STRM-A-SCDS (located east of Longview Terrace), the VOC concentration remained low in April 2012. TCE was detected at 0.017 mg/L and PCE was detected at 0.0048 mg/L.

#### **2.5.4 Permanganate Parameter Monitoring Results**

Permanganate application occurred during this reporting period as outlined in Section 2.1 and **Table 1**. Sampling for analytical parameters associated with permanganate treatment during this monitoring period was completed in April 2012, before treatment was initiated as part of the 2012 treatment program. In addition, groundwater samples were collected from select wells in April 2012 for bench-top colorimetric permanganate concentration analysis, before the 2012 permanganate injections began. The permanganate analysis results are provided in **Table 9**. As would be expected, samples from wells where permanganate injection was conducted in 2011 indicated residual permanganate was present. For example, permanganate was detected at 19,000 mg/L in AP12-BR located at the corner of Building 6.

Typically, the dissolved iron concentrations (**Table 7**) are expected to decrease in treatment areas due to the oxidizing nature of permanganate and associated iron precipitation from the treated groundwater. Results of monitoring in areas where permanganate treatment has occurred generally demonstrate low or non-detect dissolved iron concentrations. For example, in AP-22-DO, located in the PSL 10 area, where permanganate injections were conducted during the summer of 2011, dissolved iron was non-detectable October 2011 and April 2012.

Generally, elevated dissolved manganese concentrations (**Table 7**) are noted where unreacted permanganate was observed. For example, at well AP22-DO, located in the PSL 10 area, permanganate was present at approximately 10,000 mg/L in April 2012 and dissolved manganese was detected at 2,030 mg/L in April 2012. Outside of the permanganate treatment areas, dissolved manganese concentrations are generally low or non-detect. At deep overburden well OB19-DO, located adjacent to Building 1 and 2 and downgradient of the permanganate injection area at Building 3, the dissolved manganese concentration was 5.78 mg/L in April 2012.

Baseline chloride concentrations at the site were highly variable (**Table 7**). As a result of permanganate treatment, chloride levels in groundwater are typically increased from the destruction of the chlorinated VOCs. For example, at OB37-DO, located inside Building 6, where residual permanganate has been present in 2011 and April 2012, the chloride concentration has ranged from 438 mg/L to 10,800 mg/L over that period compared to a baseline concentration of 20.9 mg/L in February 2004.

#### **2.5.5 Bioremediation Parameter Monitoring Results**

VOCs and bioremediation parameters in groundwater samples are analyzed quarterly to monitor reductive dechlorination processes. During this reporting period, sampling was conducted in April and

August 2012 in the bioremediation area near the Unnamed Stream and Building 3. These parameters included ORP, DO, methane, ethane, ethene and total organic carbon. These results are provided on **Table 8**.

The previously observed reductions in TCE and PCE concentrations noted in the shallow overburden groundwater near OB9-S and MW-9 located by the Unnamed Stream are the result of reductive dechlorination. The remaining breakdown products present (i.e., cis-1,2-DCE and vinyl chloride) are continuing to degrade further. Observed decreases in the detected concentrations of 1,1,1-TCA in select shallow overburden wells are also the result of reductive dechlorination. Monitoring results that continue to support this conclusion include the following:

- Favorable conditions for reductive dechlorination were established and maintained in the subsurface (dissolved oxygen levels <1.0 mg/L and negative ORP readings).
- Increased or continuing elevated ethene concentrations were observed in well MW-9 and other shallow wells in the Unnamed Stream area. Ethene is the non-toxic end product of complete dechlorination of VOCs, including vinyl chloride.
- Increased or continuing elevated ethane concentrations were observed in well BW-9, and other shallow wells in the area. Ethane is an end product resulting from the complete degradation of 1,1,1-TCA.
- Methane concentrations have increased or remained elevated in OB9-S, MW-9, and other shallow wells in the Unnamed Stream area. The presence of methane is indicative of methanogenic conditions that favor the biodegradation of target VOCs via reductive dechlorination.

April 2011 analytical results showed a healthy *Dehalococcoides sp.* bacteria (DHC) population is present at the Site. However, in August 2012, DHC bacteria were not present above detection limits. According to the laboratory, these samples had potential matrix interference issues and most of the samples could not be properly filtered to isolate the DNA. This appears to be the result of the presence of EVO in the groundwater and may have caused the matrix interference. As the EVO disperses in the aquifer, interference will reduce and collected groundwater samples will be analyzed in the next reporting period.

### **3.0 SIGNIFICANT MODIFICATIONS TO THE OPERATION, MAINTENANCE, AND/OR MONITORING PROGRAM (310 CMR 40.0892 (2)(b))**

The Phase IV Plan (IT, 2001) detailed monitoring activities for the various permanganate treatment areas of the Site. No major modifications to the Monitoring Plan were made during this reporting period. Minor adjustments to the remedial monitoring plan continue to be made as site conditions warrant and as reported in the ROS reports.

Details of the bioremediation monitoring activities have been presented in previous ROS status reports. No major modifications to the bioremediation monitoring plan were made during this reporting period. Minor adjustments to the remedial monitoring plan continue to be made as site conditions warrant.

During this reporting period emulsified vegetable oil was used as a carbon source in place of lactate to increase the effectiveness of treatment and reduce the frequency of applications.

#### **4.0 EVALUATION OF THE PERFORMANCE OF REMEDIAL ACTIVITIES (310 CMR 40.0892 (2)(c))**

As described in the preceding sections, remedial activities are progressing at the former Varian Facility Site in general accordance with the Phase IV Plan (IT, 2001). Consistently lower VOC levels and decreasing VOC concentration trends have been observed at monitoring wells across the Site as a result of the permanganate injection program. In addition, a limited bioremediation program began at the Site in 2006 and has resulted in significant decreases in VOC levels in the targeted shallow overburden wells near the Unnamed Stream. Site data continue to show that the remedial program is treating Site groundwater consistent with remedial objectives.

The following section presents recommendations for additional groundwater treatment at the Site based on an evaluation of recent analytical data, the pilot test conducted in the Building 5 Area and additional data from downgradient properties on Tozer Road.

#### **4.1 Permanganate Treatment**

The permanganate injection program for 2012 was started in July 2012 and was still ongoing at the end of September 2012 with injection volumes for this reporting period presented in **Table 1**. Results of the 2012 injections will be evaluated in the next status report based upon the data collected in the upcoming October 2012 groundwater sampling event. As warranted, additional permanganate treatment may be recommended for 2013 based on the October 2012 groundwater sample results and additional groundwater sampling planned for April 2013.

Varian is currently evaluating whether it would be feasible and appropriate to install a groundwater pumping system that would re-circulate permanganate in the deep overburden beneath Building 3. At other remedial sites, Shaw has had success in treating source areas that had limited direct access through a re-circulating system that uses groundwater pumping on the downgradient side of a source area to pull either permanganate or bioremediation additives through source material. Once groundwater is extracted by the system, additional remedial additives are mixed with the groundwater and it is re-injected upgradient of the source. This type of system not only treats groundwater, but also provides flushing of an otherwise inaccessible source area with cleaner groundwater and remedial additives. As a result, treatment time can be greatly reduced and VOC concentration rebound limited. Due to the elevated VOC concentrations in deep overburden groundwater beneath Building 3, Varian is considering a re-circulating groundwater system that would initially use permanganate. If warranted, bioremediation could be used later as a polishing process to treat 1,1,1-TCA or residual TCE. It is expected that the evaluation of the potential applicability of a permanganate re-circulating system will be completed in the next three to six months. The results of that evaluation and proposed modifications to the remedial measure at the Site will be discussed in the next ROS report in April 2013.

## 4.2 Bioremediation

Bioremediation activities were conducted in the summer of 2012 and were described in this ROS report. The bioremediation program appears to have addressed the shallow overburden impact of TCE and PCE in the area of the Unnamed Stream. Based on an evaluation of data through August 2012, active reductive dechlorination is continuing to address residual VOC daughter products in the shallow overburden near the Unnamed Stream. Results from upcoming groundwater sampling events will be used to monitor this program and adjustments will be made to continue dechlorination of VOC daughter products. Bioremediation in the deep overburden near Building 3 has been postponed pending the evaluation of a permanganate re-circulating system in this area.

## 4.3 Building 3 IRA

In December 2009, a SVE system was installed and activated by Varian in conformance with the Building 3 Immediate Response Action (IRA) Plan for RTN 3-28531. The SVE system is being operated to reduce soil VOC impacts as well as depress ambient pressure under the Building 3 floor to further control potential vapor intrusion into the building.

Phase II CSA and Phase III Remedial Action Plan reports were submitted for RTN 3-28531 in May 2012 (Shaw, 2012a and Shaw, 2012b). The Phase II report presented new soil analytical data showing residual VOC impacts below Building 3. The Phase II report concluded that a Condition of No Significant Risk has been achieved with the operation of the existing SVE system. The Phase III report identified the operation of the existing SVE system with some minor modifications as the selected remedial alternative for the Building 3 Area. As discussed in the September 2012 IRA Status Report, modifications to the existing SVE system have been made in an effort to focus treatment in the area of residual VOCs in soil beneath Building 3 (Shaw, 2012c).

Based on the data presented in the September 2012 IRA Status Report under RTN 3-28531, the operation of this SVE system is effectively removing VOCs from the subsurface beneath Building 3, mitigating potential migration of vapors into the building, and has eliminated the condition that gave rise to the IRA condition (Shaw, 2012c). It should be noted that, while shallow soil and groundwater impacts are relevant to potential vapor intrusion concerns, permanganate treatment adjacent to Building 3 described in this ROS Status Report has typically focused on treating elevated residual VOCs in deep overburden groundwater. Therefore, the ROS remedial activities which address groundwater clean-up goals in the Building 3 Area are addressed separately from the Building 3 IRA activities that are designed to achieve No Significant Risk in indoor air.

Varian will continue to assess and evaluate the potential indoor air conditions in the area adjacent to and under the northeast corner of Building 3 and conduct appropriate response actions as part of the IRA associated with RTN 3-28531. It is anticipated that modifications to the existing SVE system will focus treatment on recently identified VOC impacted soil and that following additional SVE system operation it will be determined if additional treatment of shallow soil and/or groundwater beneath the building will be required to achieve a Permanent Solution. Once this determination is made, and before the Phase IV deadline for RTN 3-28531 (i.e. May 28, 2013), a Phase IV report detailing the final Remedy

Implementation Plan will be submitted to the MADEP. Once the final Phase IV report for RTN 3-28531 is submitted to the MADEP, the IRA will be closed and that RTN will be linked to the Former Varian Facility Site RTN (3-0485).

#### 4.4 Building 5 and 6

As presented in the previous ROS report, indoor air sampling results do not indicate the presence of an Imminent Hazard or Significant Risk in Building 5 or 6. At Building 6, the estimated hazards are below the MCP limit. The current indoor air sampling data in Building 5 suggest that indoor air concentrations are variable and the estimated hazards are at but do not exceed the MCP risk limit. However, it is likely that a Permanent Solution for the Site may not be achieved without some VOC remediation at Building 5 to reduce potential risk to site workers.

In June 2012, Shaw sealed a utility trench located in Building 5 in an effort to eliminate a potential vapor migration pathway. The utility trench is located in the floor in a room near the Shipping Area and this trench is covered by steel plates. See **Figure 11** for the utility trench location. Accessible portions of the walls and bottom of this utility trench were sealed using Henry CM100 waterproofing membrane.

To evaluate the potential use of SVE to remediate VOCs in vadose zone soil beneath Building 5, Shaw installed three horizontal SVE trench wells in July 2012. The SVE trench wells were installed in accessible locations around the former floor drain system and sump that represent the likely source of sub-surface VOC impacts resulting in indoor air concentrations. The SVE trench wells were installed in the Sanding Room, Shipping Area, and the QA Area in Building 5 (**Figure 11**). During installation of the trench SVE wells, soil beneath the floor was observed to consist of hard packed silty till. Soil was excavated from beneath the concrete floor slab using hand tools and a vacuum truck, and then the soil was transferred to a roll-off container pending characterization. Soil samples were collected periodically during excavation and screened for VOCs using a jar headspace screening method and a photoionization detector (PID). Soil headspace screening results revealed VOC concentrations of up to 52 ppm in the Sanding Room trench, up to 22 ppm in the Shipping Area trench, and up to 22 ppm in the QA Area trench. Trench SVE well BLDG5-SVE1 was completed as an 11 foot horizontal SVE well in the Sanding Room. BLDG5-SVE-2 was installed as a 15.75 foot horizontal SVE well in the Shipping Area and BLDG5-SVE3 was completed as a 15.5 foot horizontal SVE well in the QA Area. Each SVE trench was backfilled with stone and covered with concrete. A more complete discussion of the construction of the three SVE trench wells installed in the Building 5 area will be included in an upcoming Phase III and IV Modification report for RTN 3-0485.

As discussed above, the excavated soils were stored in a roll-off pending characterization for disposal purposes. During transfer of the soil from the vacuum truck to the roll-off container, indications of petroleum impacts to the excavated soil were observed; however, no evidence of petroleum impacts had been noted during excavation activities. Following an inspection of the vacuum truck it was determined that the tank on the truck had not been cleaned well prior to arriving at the Site and the excavated soil had become impacted by residual fuel oil in the truck's tank. A sample of the excavated soil was collected and sent to ALS Environmental for VOC, extractable petroleum hydrocarbons (EPH), total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), and toxicity characteristic leaching



procedure (TCLP) metals analysis. Analytical results revealed VOC concentrations were non-detect and low levels of TPH were detected. The low TPH impacts are not believed to be related to a release at the Site but from petroleum contamination present in the vacuum truck's tank from a previous load of fuel oil. The excavated soil was subsequently transported off-site for disposal as a non-regulated waste. A copy of the Hazardous Waste Manifest is included in **Appendix E**.

A soil sample was collected from the bottom of the excavations at BLDG5-SVE2 and BLDG5-SVE1 and was submitted for laboratory analysis of VOC by EPA Method 8260B at ALS Environmental. These soil samples were collected using methods consistent with EPA Method 5035 to limit volatilization of target VOC. The analytical reports for the July 2012 soil sampling are included in **Appendix B**. Analytical results of soil samples collected in Building 5 Area in July 2012 are summarized on **Table 10** and indicate VOCs were not detected above the reporting limit.

On September 8, 2012, Shaw conducted a soil vapor extraction pilot test using two of the SVE trench wells to evaluate vapor flow characteristics, VOC recovery, potential groundwater infiltration and radius of influence. The tests were completed by temporarily connecting the wells to a blower with carbon off gas treatment and extracting soil vapor from beneath the building floor. During the SVE pilot test, recovered soil vapor was field screening using a PID and indicated VOC concentrations of up to 62 ppm at BLDG5-SVE1 and 2.6 ppm at BLDG5-SVE2. A soil vapor sample was collected in a Summa canister from the SVE blower effluent during the maximum flow rate phase of each of the two tests. The samples were submitted to ALS Environmental for analysis of VOCs by EPA Method TO-15 and the analytical results are summarized in **Table 11**. A copy of the laboratory report is included as **Appendix B**. As indicated in **Table 11**, TCE was detected in the soil vapor sample collected from BLDG5-SVE1 at a concentration of 240,000 ug/m<sup>3</sup> (44 ppm) and in the soil vapor sample collected from BLDG5-SVE2 at a concentration of 5,800 ug/m<sup>3</sup> (1.1 ppm). Although the data is still being evaluated, preliminary results of the pilot study indicate that an SVE system would be effective at removing VOC from vadose zone soil beneath Building 5 and at limiting potential vapor migration into the building. Complete details of the pilot test will be included in an upcoming Phase III and IV Modification report for the Building 5 Area of the Site. A supplemental Phase III and Phase IV report will be prepared to include SVE as a remedial alternative in the Building 5 area since SVE was not evaluated in the existing Phase III and Phase IV documents completed for RTN 3-0485. Based upon discussions with the MADEP, it is acceptable to implement an additional remedial approach (i.e., SVE) after submitting a supplemental Phase III and IV, and continue concurrently with permanganate and bioremediation groundwater remediation program under this ROS (Shaw, 2012c). After installation and operation of the SVE system in Building 5, additional soil vapor and indoor air sampling will be conducted to monitor the effectiveness of the SVE system.

## **4.5 Soil Vapor and Indoor Air Evaluations at Offsite Tozer Road Properties**

### **4.5.1 30 Tozer Road**

Groundwater analytical data from OB42-S at 30 Tozer Road indicated concentrations of TCE, PCE, and cis-1,2,-DCE above GW-2 standards. These exceedences of GW-2 standards warranted further assessment. Analytical results of the soil vapor sampling collected inside the 30 Tozer Road building (VP-4 30 Tozer) exceed the MADEP vapor screening criteria for TCE and PCE. On behalf of Varian, Shaw has requested and obtained access to the 30 Tozer Road building to conduct additional assessment. This additional assessment will include concurrent sampling of soil vapor and indoor air at three locations in the building. It is expected that this sampling will be conducted in winter 2012/2013. The soil vapor and indoor air analytical data collected will be evaluated in an effort to confirm that the condition of No Significant Risk documented in the Phase II Report for RTN 3-0485 (IT, 2000) continues to exist for site workers at buildings located at this downgradient property.

### **4.5.2 32 Tozer Road Indoor Air Evaluation**

No new activities were conducted at 32 Tozer Road during this reporting period by Varian. Currently, building renovations are underway by the owners and the majority of the building is unoccupied. According to the property owner (Cell Signal Technology), renovations to the 32 Tozer Road building will include significant changes to the floor plan and installation of a seal on the concrete floor in part to minimize potential vapor intrusion. Varian and Shaw understand that, during building renovations, appropriate measures will be taken by the property owner and their environmental consultant to monitor potential exposure to construction workers. Shaw will coordinate installation of up to four soil vapor monitoring points within the building with the property owner and their contractors during on-going construction activities. It is not expected that building renovations will be completed until April 2013. Once the building renovations are complete, Shaw will complete soil vapor and indoor air sampling within the building. The soil vapor and indoor air analytical data collected will be evaluated in an effort to confirm that the condition of No Significant Risk documented in the Phase II Report for RTN 3-0485 (IT, 2000) and the October 2011 ROS report (Shaw, 2011), continues to exist for site workers at this downgradient property.

### **4.5.3 39 Tozer Road Indoor Air Evaluation**

Groundwater analytical results from OB41-S at 39 Tozer Road indicated concentrations below GW-2 standards for detected VOCs except TCE. An exceedence of GW-2 standards implies the potential for groundwater to impact indoor air in occupied buildings. Consistent with MADEP guidance, Shaw and Varian plan on conducting soil vapor and indoor air sampling within the 39 Tozer Road building to further evaluate the potential for indoor air impacts. Shaw is currently working with the property owner to coordinate collection of soil vapor and indoor air samples within the existing building at 39 Tozer Road. Based on a recent site meeting with the property owner, the building at 39 Tozer is currently occupied by a short-term tenant conducting activities that represent a number of potential background sources of VOCs in indoor air (e.g. fabricating fiberglass products). This tenant is expected to vacate the building in November 2012. As a result, indoor air sampling at 39 Tozer Road will be delayed until January or February 2013 to reduce the potential of background sources of VOCs in indoor air. Soil vapor and indoor air analytical data collected will be evaluated in an effort to confirm that the condition of No

Significant Risk documented in the Phase II Report for RTN 3-0485 (IT, 2000) continues to exist for site workers at this downgradient property.

#### **5.0 MEASURES TAKEN TO ADDRESS PROBLEMS AFFECTING THE PERFORMANCE OF THE REMEDIAL ACTION (310 CMR 40.0892 (2)(d))**

No problems affecting the performance of the selected remedial actions were identified during this reporting period. Minor modifications to the original Phase IV Remedial Implementation Plan (IT, 2001) continue to be made as needed based on site conditions and are reported to MADEP in regular status reports. As demonstrated by the analytical data in this ROS report, significant remedial progress continues to be made with lower VOC concentrations measures across the Site. The performance of on-going remedial actions conducted will continue to be documented in future ROS reports.

## 6.0 REFERENCES

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Shaw, 2012c. Immediate Response Action Status Report, Building 3, Former Varian Facility Site, 150 Sohier Road, Beverly, Massachusetts, RTN 3-28531, September 26, 2012.

## **7.0 LIMITATIONS ON WORK PRODUCT**

The information contained in this report, including its conclusions, is based upon the information that was made available to Shaw during the investigation and obtained from the services described, which were performed within time and budgetary restraints.

Shaw makes no representation concerning the legal significance of its findings or of the value of the property investigated. Shaw has no contractual liability to any third parties for the information or opinions contained in this report.

Unless and until the parties agree otherwise in writing, the use of this report or any information contained therein by any third party shall be at such third party's sole risk. Such use shall constitute an agreement to release, defend and indemnify Varian Medical Systems, Inc. and Shaw from and against any and all liability in connection therewith.

## TABLES

**Table 1**  
**Permanganate Injection Volumes 2012**

Former Varian Facility Site  
150 Sohier Road  
Beverly, MA

Injection Well ID	Permanganate Target Volume (gallons)	Permanganate Volume Injected To Date	Volume Remaining
AP12-DO	374	336	38
AP26-DO	372	380	0
OB12-DO	374	336	38
OB35-DO	90	64.75	25.25
OB27-BR	370	345	25
OB25-BR	373	345	28
Totals	1953	1806.75	154.25

Notes:

Volumes reported in gallons of 20% permanganate solution

Total includes injections conducted during this reporting period (7/25/12 through 9/30/12)

Volume remaining based on proposed volumes

**Table 2**  
**Bioremediation Injection Volumes - 2012**

Former Varian Facility Site  
 150 Sohler Road  
 Beverly, MA

Well ID	Volume of EVO Solution Injected (gallons) <sup>(1)</sup>	Volume of Flush Water Injected (gallons)
OB15-S	255	0
MW-9 <sup>(2)</sup>	35	0
OB9-S	235	0
BW-2	560	550
BW-5	565	550
BW-6 <sup>(3)</sup>	210	0
BW-8	625	550
BW-9	610	550
Total	3095	2200

Notes:

(1) mix ratio = 5 gallons EVO per drum of water

(2) EVO injected at MW-9 due to low flow at OB15-S (similar screen intervals)

(3) EVO injected at BW-6 due to low flow at OB9-S (similar screen intervals)

EVO - Emulsified Vegetable Oil



**Table 3**  
**Soil Vapor Results**  
**30 Tozer Road**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

	SV-3 30 TOZER outside building 1/10/2012	SV-4 30 TOZER inside building 5/16/2012	Commercial Sub-slab Soil Gas Screening Values*
<b>CONSTITUENT (ug/m<sup>3</sup>)</b>			
1,1,1-Trichloroethane	<3.0	<84	100000
1,1,2,2-Tetrachloroethane	<0.74	<21	4.1
1,1,2-Trichloroethane	<3.0	<84	15
1,1-Dichloroethane	<2.2	<63	11000
1,1-Dichloroethene	<2.2	<62	4100
1,2-Dibromoethane (EDB)	<0.84	---	na
1,2-Dichlorobenzene	<6.5	---	4100
1,2-Dichloroethane	<2.2	<63	9.1
1,2-Dichloropropane	<2.5	<71	13
1,3-Dichlorobenzene	<6.5	---	4100
1,4-Dichlorobenzene	<6.5	---	100
1,4-Dioxane	<25	---	58
2-Butanone	7.2	---	na
2-Hexanone	<2.2	---	na
4-Methyl-2-pentanone	<4.5	---	na
Acetone	55	1700	16000
Benzene	5.2	---	770
Bromodichloromethane	<0.74	<21	13
Bromoform	<5.7	<160	220
Bromomethane	<2.1	<60	100
Carbontetrachloride	<0.35	<9.8	60
Chlorobenzene	<2.5	<71	410
Chloroethane	---	<81	na
Chloroform	<2.7	<76	210
Chloromethane	---	<63	na
cis-1,2-Dichloroethene	6.7	<62	700
cis-1,3-Dichloropropene	<5.0	<140	60
Dibromochloromethane	<0.94	<27	9.8
Dichloromethane	<1.9	<53	770
Ethylbenzene	4.7	<130	20000
Hexachlorobutadiene	<15	---	320
m/p-xylene	16	<270	na
Methyltert-butylether	<3.9	---	62000
Naphthalene	<9.9	---	190
o-Xylene	5.2	<130	na
Styrene	<4.7	---	420
Tetrachloroethene	73	1100	290
Toluene	15	---	100000
trans-1,2-Dichloroethene	<2.2	<62	1400
Trans-1,3-Dichloropropene	<2.5	<70	60
Trichloroethene	250D	3300	140
Trichlorofluoromethane	---	<87	na
Vinyl chloride	<0.30	<8.4	27
Xylene (total)	21	<270	2000

**Notes:**

na - not applicable

D = Result reported from a diluted run

ug/m<sup>3</sup> = Micrograms per cubic meter

\*- Soil Gas screening value from Massachusetts Department of Environmental Protection  
Interim Final Vapor Intrusion Guidance (WSC#-11-435), December 2011

shaded results exceed screening value

**Table 4**  
**Water Quality Data - 39 Tozer Road**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE_ID	Property	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
GW-2 Standard				4	1	0.08	0.005	0.002	0.2	0.05	NA	NA	0.05	0.03	NA	0.002	0.1	0.09	
OB-41-S	39 Tozer	4/5/2011	13	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.05	<b>0.26</b>	ND(0.0040)	ND(0.0040)	0.081	ND(0.0040)	
		10/25/2011	13	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.03	<b>0.12</b>	ND(0.0020)	ND(0.0020)	0.04	ND(0.0020)
		4/5/2012	13.2	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.017	<b>0.069</b>	ND(0.0020)	ND(0.0020)	0.028	ND(0.0020)

**Notes:**

Analytical results presented in milligrams per liter (mg/l).

Analytical results are reported by the laboratory in micrograms per liter (ug/l). Results are presented without changing the number of significant figures reported by the laboratory.

1,1,2-Trichloroethane, 1,2-dichloropropane, dichloromethane and dichlorodifluoromethane are compounds which have been detected but are not included on the table.

Sample depths are in feet below grade.

NA - None Established

TCA - Trichloroethane

DCE - Dichloroethene

TCE - Trichloroethene

DCA - Dichloroethane

PCE - Tetrachloroethene

ND - None Detected, detection limit provided in parentheses

**Bold -** Exceeds GW-2 Standard listed

**Table 5A  
Water Quality Sample Summary  
April 2012**

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

<b>Sample Location</b>	<b>Rationale for Sampling</b>	<b>Analysis Performed</b>
AP-12-DO	Monitor performance of remedial action	VOCs Permanganate
AP-12-BR	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-12-S	Monitor performance of remedial action	VOCs Permanganate
AP-13-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride
AP-13-S	Monitor performance of remedial action	VOC (Full List)
AP-14S	Monitor trends	VOCs
AP-15-S	Monitor trends and residual permanganate	VOCs
AP-19	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-20	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-21	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-22	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-23-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride
AP-24-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride
AP-25-DO AP-26-DO	Monitor performance of remedial action Monitor trends	VOCs VOCs Permanganate
AP-27-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-30R-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-31-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
AP-32-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate

**Table 5A  
Water Quality Sample Summary  
April 2012**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

<b>Sample Location</b>	<b>Rationale for Sampling</b>	<b>Analysis Performed</b>
AP-BIO-01	Monitor trends	VOCs
BW-03	Monitor performance of remedial action	VOCs
BW-04	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
BW-05	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
BW-06	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
BW-08	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
BW-09	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
B-2	Monitor performance of remedial action	VOCs
B-3	Monitor performance of remedial action	VOC (Full List)
BR-1 ZONE1	Monitor trends	VOCs
BR-1 ZONE2	Monitor trends	VOCs
BR-1 ZONE3	Monitor trends	VOCs
BR-3 ZONE1	Monitor trends	VOCs
BR-3 ZONE2	Monitor trends	VOCs
BR-3 ZONE3	Monitor trends	VOCs
BR-5 ZONE1	Monitor trends	VOCs
BR-5 ZONE2	Monitor trends	VOCs
BR-5 ZONE3	Monitor trends	VOCs
BR-6 ZONE1	Monitor trends	VOCs
BR-6 ZONE2	Monitor trends	VOCs
BR-6 ZONE3	Monitor trends	VOCs
BR-7 ZONE1	Monitor trends	VOCs
BR-7 ZONE2	Monitor trends	VOCs
BR-7 ZONE3	Monitor trends	VOCs
CL-2-BR	Monitor trends	VOCs
CL-3-DO	Monitor trends	VOCs
CL-3-S	Monitor trends	VOCs
CL-4-BR	Monitor trends	VOCs
CL-4-DO	Monitor trends	VOCs
CL-6-BR	Monitor trends	VOCs
CL-6-DO	Monitor trends	VOCs
CL8-BR ZONE1	Monitor trends	VOCs
CL8-BR ZONE2	Monitor trends	VOCs
CL8-BR ZONE3	Monitor trends	VOCs
CL-8-DO	Monitor trends	VOCs
CL9-BR ZONE1	Monitor trends	VOCs
CL9-BR ZONE2	Monitor trends	VOCs
CL9-BR ZONE3	Monitor trends	VOCs
CL-9-DO	Monitor trends	VOCs
CL-10-BR	Monitor performance of remedial action	VOCs

**Table 5A  
Water Quality Sample Summary  
April 2012**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

<b>Sample Location</b>	<b>Rationale for Sampling</b>	<b>Analysis Performed</b>
CL-10-DO	Monitor performance of remedial action	VOCs Permanganate
CL-10-S	Monitor performance of remedial action	VOCs
CL-11-S	Monitor trends	VOCs
CL-11-DO	Monitor trends	VOCs
Culvert Outfall	Monitor trends	VOCs
GZ-1	Monitor trends	VOCs
GZ-4	Monitor trends	VOCs
MW1-32 Tozer	Monitor trends	VOCs
MW2-32 Tozer	Monitor trends	VOCs
MW3-32 Tozer	Monitor trends	VOCs
MW-002R	Monitor trends	VOCs
MW-003R	Monitor trends	VOCs
MW-004R	Monitor trends	VOCs
MW-005R	Monitor trends	VOCs
MW-008	Monitor performance of remedial action	VOCs
MW-009	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
MW-009A	Monitor performance of remedial action	VOCs
MW-013	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
MW-014A	Monitor trends	VOCs
MW-033B	Monitor trends	VOCs
MW-034	Monitor trends	VOCs
MW-036	Monitor trends	VOCs
OB-04-BR	Monitor trends	VOCs
OB-04-DO	Monitor trends	VOCs
OB-04-S	Monitor trends	VOCs
OB-5-BR	Monitor trends	VOCs
OB-5-DO	Monitor trends	VOCs
OB-5-S	Monitor trends	VOCs
OB-6-BR	Monitor trends	VOCs
OB-6-DO	Monitor trends	VOCs
OB-8-DO	Monitor trends	VOCs
OB-8-S	Monitor trends	VOCs
OB-09-BR	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
OB-09-DO	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
OB-09-S	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.

**Table 5A  
Water Quality Sample Summary  
April 2012**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

<b>Sample Location</b>	<b>Rationale for Sampling</b>	<b>Analysis Performed</b>
OB-10-BR	Monitor trends	VOCs
OB-10-DO	Monitor trends	VOCs
OB-10-S	Monitor trends	VOCs
OB-11-BR	Monitor trends	VOCs
OB-11-DO	Monitor trends	VOCs
OB-12-DO	Monitor performance of remedial action	VOCs Permanganate
OB-12-S	Monitor performance of remedial action	VOCs
OB-14-DO	Monitor trends	VOCs
OB-15-S	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
OB-16-BR	Monitor trends	VOCs
OB-16-S	Monitor trends	VOCs
OB-17-BR	Monitor trends	VOCs
OB-17-DO	Monitor trends	VOCs
OB-18-DO	Monitor performance of remedial action	VOCs
OB-18-S	Monitor trends	VOCs
OB-19-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
OB-19-S	Monitor trends	VOCs
OB-20-BR	Monitor trends	VOCs
OB-20-DO	Monitor trends	VOCs
OB-20-S	Monitor trends	VOCs
OB-21-BR	Monitor trends	VOCs
OB-21-DO	Monitor trends	VOCs
OB-23-BR	Monitor trends	VOCs
OB-24-S	Monitor trends	VOCs
OB-25-BR	Monitor trends	VOCs Permanganate
OB-26-BR	Monitor trends	VOCs Permanganate
OB-27-BR	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
OB-28-BR	Monitor trends	VOCs Permanganate
OB-32-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
OB-34-DO	Monitor performance of remedial action	VOCs Permanganate
OB-35-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
OB-36-DO	Monitor performance of remedial action	VOCs Permanganate

**Table 5A  
Water Quality Sample Summary  
April 2012**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

<b>Sample Location</b>	<b>Rationale for Sampling</b>	<b>Analysis Performed</b>
OB-37-DO	Monitor performance of remedial action	VOCs Fe & Mn Chloride Permanganate
OB-38-DO	Monitor performance of remedial action	VOCs
OB-41-S	Monitor VOC trends in shallow aquifer	VOCs
OB-42-S	Monitor VOC trends in shallow aquifer	VOCs
OB-43-S	Monitor VOC trends in shallow aquifer	VOCs
P-11R	Monitor trends	VOCs
P-19A	Monitor trends	VOCs
P-20R	Monitor trends	VOCs
RW-22	Monitor trends	VOCs
STR-03	Monitor performance of remedial action	VOCs Fe & Mn Chloride
STRHA-7A	Monitor VOC trends in surface water	VOCs
STRHA-7B	Monitor VOC trends in surface water	VOCs
Stream A SCDS	Monitor VOC trends in surface water	VOCs
Unnamed Stream	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Metabolic Acids Dehalococcoides sp.
W-1	Monitor VOC trends in shallow aquifer	VOCs
<p><b>Notes:</b>  VOCs = Volatile Organic Compounds, analysis by EPA Method 8260C  Methane, ethane, ethene analysis by RSK-175 Method  Metabolic Acids analysis by HPLC Method  Dehalococcoides sp. analysis by polymerase chain reaction (PCR)</p>		

**Table 5B  
Water Quality Sample Summary  
August 2012**

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

<b>Sample Location</b>	<b>Rationale for Sampling</b>	<b>Analysis Performed</b>
BW-03	Monitor performance of remedial action	VOCs
BW-04	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Total Organic Carbon Dehalococcoides sp.
BW-05	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Total Organic Carbon Dehalococcoides sp.
BW-06	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Total Organic Carbon Dehalococcoides sp.
BW-08	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Total Organic Carbon Dehalococcoides sp.
BW-09	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Total Organic Carbon Dehalococcoides sp.
MW-008	Monitor trends	VOCs
MW-009	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Total Organic Carbon Dehalococcoides sp.
OB-09-BR	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Total Organic Carbon
OB-09-DO	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Total Organic Carbon
OB-09-S	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Total Organic Carbon Dehalococcoides sp.
OB-10-S	Monitor trends	VOCs
OB-12-S	Monitor performance of remedial action	VOCs
OB-15-S	Monitor performance of remedial action	VOCs Methane, Ethane, Ethene Total Organic Carbon Dehalococcoides sp.
STR-03	Requested by Conservation Commission	VOCs
UNNAMED STREAM	Requested by Conservation Commission	VOCs Methane, Ethane, Ethene Total Organic Carbon Dehalococcoides sp.
<p><b>Notes:</b>  VOCs = Volatile Organic Compounds, analysis by EPA Method 8260C  Methane, ethane, ethene analysis by RSK-175 Method  Metabolic Acids analysis by HPLC Method  Dehalococcoides sp. analysis by polymerase chain reaction (PCR)</p>		



**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
AP-02	6/3/2002	40	0.2	0.034	0.007	ND(0.0020)	0.003	ND(0.0020)	0.26	ND(0.010)	ND(0.010)	0.17	0.29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	6/3/2002	56	0.21	0.042	0.008	ND(0.0020)	0.004	ND(0.0020)	0.27	ND(0.010)	ND(0.010)	0.24	0.41D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	2/17/2003	56	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.021	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/14/2003	56	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.009	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	12/16/2003	56	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/1/2004	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	5/2/2005	56	0.014J	0.0021J	ND(0.0010)J	ND(0.0010)J	0.0031J	ND(0.0020)J	0.0022J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J
	4/11/2007	56	0.18	0.053	ND(0.0020)	ND(0.0020)	0.017	ND(0.0040)	0.098	ND(0.0040)	ND(0.010)	0.032	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/22/2008	55	0.1	0.035	0.0012	ND(0.0010)	0.0015	ND(0.0020)	0.0049	ND(0.0020)	ND(0.0050)	0.068	0.036	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	ND(0.0010)
4/3/2009	24	0.16	0.023	ND(0.0020)	ND(0.0020)	0.042	ND(0.0020)	0.028	ND(0.0020)	ND(0.0020)	0.032	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
AP-03-BR	9/21/2005	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.027	0.41	ND(0.010)	ND(0.020)	1.2	ND(0.010)	
	1/6/2006	108	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/30/2006	104	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/12/2007	107	ND(0.0010)	0.0018	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0027	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
AP-03-DO	1/3/2005	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0012	0.0041	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/2/2005	42	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0014J	0.0038J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J	
	1/6/2006	45	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/30/2006	41	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	2/1/2007	45	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0034	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/12/2007	44	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
AP-04-BR	9/21/2005	NA	ND(0.010)	0.021	0.02	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.15	0.82	ND(0.010)	0.024	1.2	ND(0.010)	
	1/6/2006	120	ND(0.0050)	0.01	0.0051	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0059	0.21	ND(0.0050)	0.011	0.66	ND(0.0050)	
	3/30/2006	121	ND(0.0050)	0.013	0.0083	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.019	0.24	ND(0.0050)	0.014	0.64	ND(0.0050)	
	4/12/2007	125	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.12	ND(0.010)	ND(0.020)	0.77	ND(0.010)	
AP-04-DO	1/3/2005	42	ND(0.0010)	0.0014	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.018	0.07	ND(0.0010)	ND(0.0020)	0.016	ND(0.0010)	
	5/2/2005	42	ND(0.0010)J	0.0027J	0.0023J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.031J	0.11J	ND(0.0010)J	ND(0.0020)J	0.024J	ND(0.0010)J	
	2/1/2007	45	ND(0.0050)	0.011	0.0055	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0054	0.14	ND(0.0050)	0.011	0.61	ND(0.0050)	
AP-06-BR	6/3/2002	55	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	ND(0.010)	ND(0.010)	0.009	0.034	ND(0.0020)	ND(0.0020)	0.004	ND(0.0020)	
	6/3/2002	70	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.007	ND(0.010)	ND(0.010)	0.015	0.063	ND(0.0020)	ND(0.0020)	0.008	ND(0.0020)	
	6/3/2002	99	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.006	ND(0.010)	ND(0.010)	0.011	0.059	ND(0.0020)	ND(0.0020)	0.007	ND(0.0020)	
	1/24/2003	99	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.005	0.02	ND(0.0020)	ND(0.0020)	0.004	ND(0.0020)	
	5/14/2003	99	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.009	ND(0.0020)	ND(0.0020)	0.003	ND(0.0020)	
	12/17/2003	99	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.012	ND(0.0010)	ND(0.0020)	0.0052	ND(0.0010)
	5/1/2004	98	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0048	ND(0.0010)	ND(0.0020)	0.0023	ND(0.0010)
	4/29/2005	96	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0020)	0.0011	ND(0.0010)
	3/31/2006	99	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0055	ND(0.0010)	ND(0.0020)	0.0024	ND(0.0010)
	4/11/2007	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0022	0.0082
	4/22/2008	75	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.01
	4/1/2009	93	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0022	ND(0.0010)	0.024	0.059	ND(0.0010)
	AP-06-DO	6/3/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
		6/3/2002	44	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
1/24/2003		44	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
5/14/2003		44	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
12/17/2003		44	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
5/1/2004		43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
4/29/2005		43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
3/31/2006		42	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
4/11/2007		43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
4/22/2008		43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
AP-08-DO	8/13/2003	NA	ND(0.0020)	0.003	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.034	0.12	ND(0.0020)	ND(0.0020)	0.026	ND(0.0020)	
	12/23/2003	40	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0037	0.013	ND(0.0010)	ND(0.0020)	0.0017	ND(0.0010)	
	5/3/2004	35	0.001	0.0066	0.006	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.19D	0.60D	ND(0.0010)	ND(0.0020)	0.13D	ND(0.0010)	
	1/4/2005	39	ND(0.0050)	0.007	0.0079	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.2	0.53	ND(0.0050)	ND(0.010)	0.13	ND(0.0050)	
	4/29/2005	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0085	ND(0.0010)	ND(0.0020)	0.0039	ND(0.0010)	
	3/29/2006	33	ND(0.0050)	0.0054	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.5	ND(0.0050)	ND(0.010)	0.13	ND(0.0050)	
	2/5/2007	40	ND(0.0050)	0.0066	0.0059	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.16	0.48	ND(0.0050)	ND(0.010)	0.13	ND(0.0050)	
	4/15/2007	40	ND(0.0050)	0.0056	0.0055	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.51	ND(0.0050)	ND(0.010)	0.15	ND(0.0050)	
AP-09-DO	8/13/2003	NA	0.005	0.013	0.02	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	0.21	0.79	ND(0.010)	ND(0.010)	0.2	ND(0.0050)	
	12/29/2003	40	ND(0.0050)	0.005	0.0079	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.11	0.45	ND(0.0050)	ND(0.010)	0.1	ND(0.0050)	
	5/3/2004	36	ND(0.010)	ND(0.010)	0.015	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.24	0.87	ND(0.010)	ND(0.020)	0.22	ND(0.010)	
	12/30/2004	37	0.0064	0.0097	0.013	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.66	ND(0.0050)	ND(0.010)	0.16	ND(0.0050)	
	4/29/2005	36	0.013	0.011	0.017	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.23	0.93	ND(0.010)	ND(0.020)	0.23	ND(0.010)	
	3/29/2006	35	0.019	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.29	1.1	ND(0.010)	ND(0.020)	0.28	ND(0.010)	
	2/5/2007	40	0.011	0.01	0.014	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.26	0.98	ND(0.010)	ND(0.020)	0.25	ND(0.010)	
	4/15/2007	40	0.0068	ND(0.0050)	0.0068	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.17	0.59	ND(0.0050)	ND(0.010)	0.16	ND(0.0050)	
AP-12-BR	6/3/2002	70	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(0.40)	6.6	31	ND(0.40)	ND(0.40)	22	ND(0.20)	
	6/3/2002	83	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.08	0.2	ND(0.10)	ND(0.10)	4.7	ND(0.050)	
	1/24/2003	83	0.022	0.012	ND(0.0010)	ND(0.0020)	0.058	ND(0.0020)	0.046	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/13/2003	83	0.011	0.007	ND(0.0010)	ND(0.0020)	0.022	ND(0.0020)	0.025	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	12/17/2003	83	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0019	ND(0.0020)	0.02	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/23/2004	80	0.002	0.0011	ND(0.0010)	ND(0.0010)	0.0023	ND(0.0020)	0.0072	ND(0.0020)	ND(0.0050)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/3/2006	74	0.0066	0.0052	ND(0.0010)	ND(0.0010)	0.0035	ND(0.0020)	0.035	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/13/2007	82	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0054	ND(0.0020)	ND(0.0050)	0.012	0.0052	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/24/2008	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	0.058	ND(0.10)	ND(0.25)	0.3	6.5	ND(0.050)	ND(0.10)	1.5	ND(0.050)	
	4/3/2009	84	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	0.47	24	ND(0.20)	ND(0.20)	9.4	ND(0.20)	
	10/26/2009	65	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	0.59	17	ND(0.20)	ND(0.20)	4.6	ND(0.20)	
	10/26/2009	76	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	ND(0.13)	0.48	12	ND(0.13)	ND(0.13)	3.6	ND(0.13)	
	4/20/2010	81	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0091	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/14/2010	81	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0046	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/14/2011	78	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	10/28/2011	74	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0031	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/6/2012	80	0.0022J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.0036J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	
	AP-12-DO	6/3/2002	45	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	19	26	ND(0.20)	ND(0.20)	0.2	ND(0.10)
		6/3/2002	58	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(0.40)	15	34	ND(0.40)	ND(0.40)	0.4	ND(0.20)
		1/24/2003	58	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	13	26	ND(0.20)	ND(0.20)	0.2	ND(0.10)
5/13/2003		58	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	11	30	ND(0.20)	ND(0.20)	0.4	ND(0.10)	
12/17/2003		58	0.0078	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.051	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0067	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/23/2004		57	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.45	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)	
4/29/2005		58	0.0034	0.0013	ND(0.0010)	ND(0.0010)	0.011	ND(0.0020)	0.053	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/3/2006		54	0.0051	0.0015	ND(0.0010)	ND(0.0010)	0.023	ND(0.0020)	0.055	ND(0.0020)	ND(0.0050)	0.15	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/13/2007		58	0.0047	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.026	ND(0.0040)	0.045	ND(0.0040)	ND(0.010)	0.15	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0020)	
4/24/2008		51	0.0063	0.0023	ND(0.0010)	ND(0.0010)	0.024	ND(0.0020)	0.052	ND(0.0020)	ND(0.0050)	0.1	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/3/2009		50	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.033	ND(0.010)	ND(0.010)	0.94	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	
10/26/2009		50	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.004	ND(0.0025)	0.019	ND(0.0025)	ND(0.0025)	0.33	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	
4/20/2010		57	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	7.1	0.53	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	
10/14/2010		37	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	7.7	0.57	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	
4/14/2011		48	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	8.8	4.6	ND(0.10)	ND(0.10)	0.16	ND(0.10)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)	
AP-12-DO (Cont.)	10/28/2011	44	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	10D	27D	ND(0.10)	ND(0.10)	2.7	ND(0.10)	
	4/5/2012	56	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	14	39	ND(0.50)	ND(0.50)	4.2	ND(0.50)	
AP-12-S	6/3/2002	30	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	12	7.2	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.10)	
	2/20/2003	30	0.011	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/13/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.003	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	12/17/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0024	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/23/2004	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	30	0.028	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0046	ND(0.0020)	0.0022	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2006	21	0.015	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0020)	0.0016	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/13/2007	30	0.017	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0020)	0.0019	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.014	ND(0.0010)
	4/24/2008	29	0.013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/22/2008	30	0.011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0031	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/3/2009	26	0.011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0032	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	29	0.0088	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0035	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/14/2011	31	0.008	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0044	ND(0.0020)	ND(0.0020)	0.0027	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.50)
	4/5/2012	26	0.0062	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0032	ND(0.0020)	ND(0.0020)	0.016	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	AP-13-DO	6/3/2002	50	0.5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(3.0)	ND(1.0)	5.0	49	ND(1.0)	ND(1.0)	ND(0.50)	ND(0.50)
6/3/2002		61	0.8	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(3.0)	ND(1.0)	9.5	110	ND(1.0)	ND(1.0)	0.9	ND(0.50)	
1/29/2003		61	20	1.8	1.5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(3.0)	ND(1.0)	64	430DD	ND(1.0)	ND(1.0)	1.1	ND(0.50)	
5/13/2003		61	26	2.3	2.0	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(3.0)	ND(1.0)	54	540D	ND(1.0)	ND(1.0)	0.8	ND(0.10)	
12/16/2003		61	9.1	1.2	ND(0.10)	ND(0.10)	0.75	ND(0.20)	1.0	ND(0.20)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(2.0)	
5/1/2004		52	13	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(4.0)	ND(2.0)	ND(4.0)	ND(10)	38	220	ND(2.0)	ND(4.0)	ND(2.0)	ND(2.0)J	
5/2/2005		61	40J	2.4J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(4.0)J	ND(10)J	120J	220J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(0.25)	
12/30/2005		61	27	0.89	ND(0.25)	ND(0.25)	0.58	ND(0.50)	1.4	ND(0.50)	ND(1.3)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.20)	
4/3/2006		46	32D	1.8	ND(0.20)	ND(0.20)	0.4	ND(0.40)	1.7	ND(0.40)	ND(1.0)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.50)	
4/11/2007		61	46	2.2	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	3.6	ND(1.0)	ND(2.5)	68	33	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	
7/26/2007		59	34	2.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	56	100	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	
11/12/2007		36	22	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	54	110	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	
1/23/2008		36	36	2	ND(2.0)	ND(2.0)	ND(2.0)	ND(4.0)	ND(2.0)	ND(4.0)	ND(10)	78	240	ND(2.0)	ND(4.0)	ND(2.0)	ND(2.0)J	
4/21/2008		47	41J	2.4J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(4.0)J	ND(10)J	88J	270J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(2.0)J	
7/28/2008		47	35J	2.1J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(4.0)J	ND(10)J	100J	260J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(1.0)	
10/22/2008		51	29	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	88	130	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	
1/14/2009		47	25	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	87	170	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	
4/2/2009		51	28	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	86	200	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	
10/26/2009		52	29	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	84	200	ND(2.0)	ND(2.0)	5.2	ND(4.0)	
4/22/2010		60	27	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	72	290	ND(4.0)	ND(4.0)	ND(4.0)	ND(2.0)J	
7/14/2010		60	28J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	70J	290J	ND(2.0)J	ND(2.0)J	5.8J	ND(5.0)	
10/12/2010		51	28	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	75	350	ND(5.0)	ND(5.0)	ND(5.0)	ND(2.0)	
1/4/2011		61	13	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	40	160	ND(2.0)	ND(2.0)	14	ND(4.0)	
4/5/2011		51.2	18	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	46	200	ND(4.0)	ND(4.0)	5.8	ND(2.0)	
7/28/2011		51	13	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	23	150	ND(2.0)	ND(2.0)	3.8	ND(2.0)	
10/25/2011		60	19	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	44	230D	ND(2.0)	ND(2.0)	7.2	ND(2.0)	
1/17/2012		51	29	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	53	360D	ND(2.0)	ND(2.0)	3.7	ND(0.0020)	
4/3/2012	51	25	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	59	320	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)		
AP-13-S	6/3/2002	18	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.006	0.012	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	1/29/2003	18	0.023	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.36DD	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/13/2003	18	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.018	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/16/2003	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.01	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
AP-13-S (Cont.)	5/1/2004	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	---	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.032	0.0064	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/2/2005	18	0.0032J	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.023J	0.014J	ND(0.0010)	ND(0.0020)	0.0023J	ND(0.0010)	
	4/3/2006	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/11/2007	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.011	0.001	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/21/2008	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.010J	0.0035J	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	10/22/2008	16	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.011	0.012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/3/2009	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0019	0.0021	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/20/2010	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0037	0.0034	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	
	4/4/2011	16.1	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	10/26/2011	16	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0036	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	1/17/2012	16	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.10)	
	4/5/2012	16	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	AP-14-S	6/3/2002	35	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	39D	1.9	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.0020)
		2/17/2003	35	0.081	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.1	ND(0.0020)	0.037	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.10)	ND(0.0050)
5/14/2003		35	0.17	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.43	ND(0.0050)	0.086	ND(0.030)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.010)	ND(0.0050)	ND(0.0050)	
12/16/2003		35	0.13	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.49	ND(0.010)	0.079	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)	
5/1/2004		33	0.36	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.63	ND(0.010)	0.089	ND(0.010)	ND(0.025)	0.0092	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0020)	
5/2/2005		35	0.24J	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.26J	ND(0.0040)	0.046J	ND(0.0040)	ND(0.010)	0.022J	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0050)	
4/3/2006		32	0.48	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.39	ND(0.010)	0.025	ND(0.010)	ND(0.025)	0.013	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	
4/14/2007		35	1	ND(0.010)	ND(0.010)	ND(0.010)	0.67	ND(0.020)	0.092	ND(0.020)	ND(0.050)	0.018	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0020)	
4/25/2008		34	0.18	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.12	ND(0.0040)	0.016	ND(0.0040)	ND(0.010)	0.016	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0025)	
4/3/2009		32	0.19	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.14	ND(0.0025)	0.0091	ND(0.0025)	ND(0.0025)	0.28	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.010)	
4/21/2010		34	0.12	ND(0.010)	ND(0.010)	ND(0.010)	0.1	ND(0.010)	0.055	ND(0.010)	ND(0.010)	1.2	1.2	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	
4/6/2011		29.1	0.08J	ND(0.020)	ND(0.020)	ND(0.020)	0.047J	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	1.6J	0.58J	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.0020)	
4/5/2012		29	0.0093	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0064	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.35	0.048	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	
AP-15-S		8/26/2002	NA	ND(0.0020)	ND(0.0020)	0.001	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.025	0.16	ND(0.0020)	ND(0.0020)	0.089	ND(0.0020)
	9/18/2002	NA	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.012	0.14	ND(0.0020)	ND(0.0020)	0.081	ND(0.0020)	
	5/14/2003	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.006	0.06	ND(0.0020)	ND(0.0020)	0.024	ND(0.0010)	
	12/22/2003	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.016	ND(0.0010)	ND(0.0020)	0.0032	ND(0.0010)	
	5/3/2004	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0027	0.012	ND(0.0010)	ND(0.0020)	0.0036	ND(0.0010)	
	12/30/2004	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.0046	ND(0.0010)	ND(0.0020)	0.0015	ND(0.0010)	
	4/29/2005	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0013	0.007	ND(0.0010)	ND(0.0020)	0.0022	ND(0.0010)	
	3/29/2006	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0027	0.039	ND(0.0010)	ND(0.0020)	0.032	ND(0.0010)	
	2/5/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0037	0.02	ND(0.0010)	ND(0.0020)	0.01	ND(0.0010)	
	4/15/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0022	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	11/14/2007	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0074	0.11	ND(0.0010)	ND(0.0020)	0.062	ND(0.0010)	
	5/8/2008	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0019	0.027	ND(0.0010)	ND(0.0020)	0.019	ND(0.0010)	
	10/20/2008	12	0.0018	0.0045	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.014	0.083	ND(0.0010)	0.0034	0.07	ND(0.0010)	
	4/2/2009	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/27/2009	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.01	0.054	ND(0.0010)	ND(0.0010)	0.017	ND(0.0010)	
	4/20/2010	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.012	0.036	ND(0.0010)	ND(0.0010)	0.0089	ND(0.0020)	
	10/14/2010	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0036	0.025	ND(0.0020)	ND(0.0020)	0.0061	ND(0.0020)	
	4/5/2011	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	10/25/2011	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/5/2012	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
AP-19	6/25/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.095	0.03	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/14/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.23	0.048	ND(0.0020)	ND(0.0020)	0.002	ND(0.0010)		
	12/15/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.015	0.0055	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	
	4/26/2004	30	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.7	0.2	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.0010)	
	4/28/2005	30	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.010)	
	3/31/2006	29	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.4	0.17	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.025)
	4/12/2007	29	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	2.8	0.83	ND(0.025)	ND(0.050)	1.1	ND(0.010)	
	4/24/2008	29	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.92	0.15	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0010)	
	10/23/2008	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0036	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)	
	4/6/2009	27	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.4	0.06	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0025)	
	10/27/2009	27	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.32	0.054	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.010)	
	4/21/2010	29	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	1.1	0.13	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.0040)	
	10/14/2010	28	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.22	0.024	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.010)	
	4/6/2011	27.5	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.71	0.071	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.0040)	
	10/27/2011	29	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.26	0.036	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.004	
4/5/2012	27	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.94	0.085	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)		
AP-20	6/25/2002	20	0.002	0.004	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.010)	1.7	1.6	ND(0.0020)	0.005	0.62	ND(0.10)	
	5/14/2003	20	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.0010)		
	12/15/2003	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.001	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/26/2004	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/31/2006	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.12	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)	
	4/12/2007	19	ND(0.0050)	0.013	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.12	0.17	ND(0.0050)	ND(0.010)	0.53	ND(0.010)	
	4/24/2008	19	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.89	0.092	ND(0.010)	ND(0.020)	0.044	ND(0.0010)	
	10/23/2008	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.016	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/6/2009	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/27/2009	16	0.0021	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0050)	
	4/21/2010	19	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.45	0.012	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	
	10/14/2010	15	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	1	0.14	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.0040)	
	4/6/2011	15.1	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.25	0.017	ND(0.0040)	ND(0.0040)	0.01	ND(0.0020)	
	10/27/2011	19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.007	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.13	
4/5/2012	15	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.966	0.1	ND(0.0020)	ND(0.0020)	0.06	ND(0.0020)		
AP-21	6/25/2002	30	ND(0.0020)	0.5	ND(0.0010)	0.003	ND(0.0020)	0.003	ND(0.0020)	ND(0.010)	ND(0.010)	4.0	56	ND(0.0020)	0.1	32	ND(0.0020)	
	5/14/2003	30	ND(0.0020)	0.012	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/15/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/26/2004	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	
	3/31/2006	26	ND(0.0020)	0.25	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.010)	0.0074	ND(0.0020)	0.089	ND(0.0040)	ND(0.0020)	ND(0.010)	
	4/12/2007	29	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.96	0.095	ND(0.010)	ND(0.020)	0.044	ND(0.020)	
	4/24/2008	29	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	3.2	3.6	ND(0.20)	ND(0.40)	19	ND(0.0010)	
	10/23/2008	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.026	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/6/2009	28	ND(0.0010)	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0081	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0029	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	11/23/2009	28	ND(0.0010)	0.075	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0043	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.058	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/21/2010	29	ND(0.0010)	0.13	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0014	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.068	ND(0.0010)	ND(0.0010)	ND(0.0020)	
	10/14/2010	29	ND(0.0020)	0.17	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	
	4/14/2011	24	ND(0.0040)	0.19	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0020)	
	10/27/2011	29	ND(0.0020)	0.19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.01	
4/5/2012	22.2	ND(0.0020)	0.14	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)		

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
AP-22	6/25/2002	20	ND(0.010)	0.06	0.05	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.16	0.61	ND(0.020)	ND(0.020)	5.8	ND(0.0020)	
	5/14/2003	20	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/15/2003	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/26/2004	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	
	4/28/2005	18	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.6	0.19	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.0050)	
	3/31/2006	19	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.45	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)	
	4/12/2007	19	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.42	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.025)	
	4/24/2008	19	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	2.9	0.85	ND(0.025)	ND(0.050)	1.5	ND(0.0010)	
	10/23/2008	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.02	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/6/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	0.0023	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	17	ND(0.0010)	0.015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0031	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0099	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/21/2010	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0035	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0020)
	10/14/2010	19	ND(0.0020)	0.017	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0055	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/14/2011	19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0063	ND(0.0020)	ND(0.0020)	ND(0.0020)	1.4D	0.15	ND(0.0020)	ND(0.0020)	0.33D	ND(0.0020)
	10/27/2011	19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(2.0)
4/5/2012	18	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0036	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
AP-23-DO	9/23/2004	NA	2.1	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(4.0)	ND(2.0)	ND(4.0)	ND(10)	34	200	ND(2.0)	ND(4.0)	ND(2.0)	ND(0.010)	
	12/29/2004	51	0.85	ND(0.010)	ND(0.010)	ND(0.010)	0.84	ND(0.020)	0.12	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)J	
	5/2/2005	52	2.4J	ND(0.020)J	ND(0.020)J	ND(0.020)J	1.5JN	ND(0.040)J	0.28J	ND(0.040)J	ND(0.10)J	0.071J	0.030J	ND(0.020)J	ND(0.040)J	ND(0.020)J	ND(0.025)	
	12/30/2005	52	3.3	ND(0.025)	ND(0.025)	ND(0.025)	1.9	ND(0.050)	0.72	ND(0.050)	ND(0.13)	0.25	0.063	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.0025)	
	4/3/2006	29	0.27	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.056	ND(0.0050)	0.049	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.020)	
	1/31/2007	52	1.6	ND(0.020)	ND(0.020)	ND(0.020)	2.1	ND(0.040)	2.1	ND(0.040)	ND(0.10)	0.13	0.26	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.020)	
	4/11/2007	52	1.5	ND(0.020)	ND(0.020)	0.039	2.2	ND(0.040)	2.4	ND(0.040)	ND(0.10)	0.98	0.028	ND(0.020)	ND(0.040)	ND(0.020)	ND(1.0)	
	11/12/2007	48	3.4	ND(1.0)	ND(1.0)	ND(1.0)	1.9	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	53	100	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)	
	1/23/2008	48	3.8	ND(1.0)	ND(1.0)	ND(1.0)	1.2	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	49	100	ND(1.0)	ND(2.0)	ND(1.0)	ND(1.0)J	
	4/21/2008	48	2.4J	ND(1.0)J	ND(1.0)J	ND(1.0)J	ND(1.0)J	ND(2.0)J	ND(1.0)J	ND(2.0)J	ND(5.0)J	47J	120J	ND(1.0)J	ND(2.0)J	1.4J	ND(2.0)J	
	7/28/2008	51	2.0J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(4.0)J	ND(10)J	59J	210J	ND(2.0)J	ND(4.0)J	36J	ND(0.50)	
	10/22/2008	48	0.63	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	20	58	ND(0.50)	ND(1.0)	3.8	ND(1.0)	
	1/14/2009	51	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	35	140	ND(1.0)	ND(1.0)	8.2	ND(2.0)	
	4/2/2009	47	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	34	210	ND(2.0)	ND(2.0)	7	ND(2.0)	
	10/26/2009	48	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	41	210	ND(2.0)	4.2	29	ND(1.0)	
	1/28/2010	51	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.0	ND(1.0)	ND(1.0)	32	150	ND(1.0)	4.8	30	ND(2.0)	
	4/22/2010	51	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	40	270	ND(2.0)	ND(2.0)	7.1	ND(2.0)J	
	7/14/2010	14	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	50J	330J	ND(2.0)J	ND(2.0)J	12J	ND(4.0)	
	10/12/2010	47	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	46	270	ND(4.0)	ND(4.0)	17	ND(1.0)	
	1/4/2011	51	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	11	86	ND(1.0)	5.2	20	ND(4.0)	
	4/5/2011	47.4	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	20	230	ND(4.0)	ND(4.0)	6.2	ND(2.0)	
	7/28/2011	47	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	2.0	ND(2.0)	ND(2.0)	20	140	ND(2.0)	2.7	7.4	ND(2.0)	
	10/25/2011	51	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	23	240D	ND(2.0)	3.3	9.6	ND(2.0)	
1/17/2012	47.5	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	41	490D	ND(2.0)	ND(2.0)	4.7	ND(1.0)		
4/3/2012	47	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	21	350	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)		
AP-24-DO	9/23/2004	NA	110	ND(1.0)	ND(1.0)	ND(1.0)	1.9	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(0.25)	
	12/29/2004	52	32	ND(0.25)	ND(0.25)	ND(0.25)	1.0	ND(0.50)	0.49	ND(0.50)	ND(1.3)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.50)J	
	5/2/2005	53	68J	ND(0.50)J	ND(0.50)J	ND(0.50)J	2.2J	ND(1.0)J	0.58J	ND(1.0)J	ND(2.5)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(1.0)J	ND(0.50)J	ND(0.50)	
	12/30/2005	52	71	ND(0.50)	ND(0.50)	ND(0.50)	1.8	ND(1.0)	0.82	ND(1.0)	ND(2.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)	
	4/3/2006	49	63	ND(0.50)	ND(0.50)	ND(0.50)	2.0	ND(1.0)	1.3	ND(1.0)	ND(2.5)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.50)	
	1/30/2007	53	32	ND(0.50)	ND(0.50)	ND(0.50)	0.5	ND(1.0)	0.96	ND(1.0)	ND(2.5)	12	36	ND(0.50)	ND(1.0)	ND(0.50)	ND(2.0)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)
AP-24-DO (Cont.)	4/10/2007	53	55	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(4.0)	2.3	ND(4.0)	ND(10)	47	180	ND(2.0)	ND(4.0)	ND(2.0)	ND(1.0)
	8/9/2007	50	64	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	34	130N	ND(1.0)	ND(2.0)	ND(1.0)	ND(0.50)
	11/12/2007	49	40	ND(0.50)	0.91	ND(0.50)	ND(0.50)	ND(1.0)	0.75	ND(1.0)	ND(2.5)	27	56	ND(0.50)	ND(1.0)	0.64	ND(1.0)
	1/23/2008	47	33	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	1.1	ND(2.0)	ND(5.0)	48	120	ND(1.0)	ND(2.0)	2.1	ND(2.0)J
	4/21/2008	47	21J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(4.0)J	ND(10)J	65J	220J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(2.0)J
	7/28/2008	52	45J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(4.0)J	ND(10)J	61J	220J	ND(2.0)J	ND(4.0)J	ND(2.0)J	ND(2.0)J
	10/22/2008	47	19	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	32	140	ND(1.0)	ND(2.0)	13	ND(2.0)
	1/14/2009	52	22	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	41	210	ND(2.0)	ND(2.0)	10	ND(2.0)
	4/2/2009	47	36	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	54	270	ND(2.0)	ND(2.0)	19	ND(2.0)
	10/26/2009	48	62	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	32	270	ND(2.0)	4.2	44	ND(2.0)
	1/28/2010	52	41	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	39	240	ND(2.0)	6.0	14	ND(2.0)
	4/22/2010	52	52	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	21	270	ND(2.0)	3.7	14	ND(2.0)J
	7/14/2010	15.5	38J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	ND(2.0)J	26J	260J	ND(2.0)J	15J	65J	ND(4.0)
	10/12/2010	47	27	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	13	190	ND(4.0)	27	41	ND(1.0)
	1/4/2011	52	9.5	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	19	9.8D	ND(1.0)	30	75	ND(4.0)
	4/5/2011	47.3	43	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	24	300	ND(4.0)	10	28	ND(0.20)
	7/28/2011	47	1.2	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	0.22	ND(0.20)	ND(0.20)	1.7	16	ND(0.20)	0.94	1.7	ND(0.20)
	10/25/2011	52	35D	ND(0.20)	1.2	ND(0.20)	ND(0.20)	ND(0.20)	0.74	ND(0.20)	ND(0.20)	31DJ	350DJ	ND(0.20)	6.9	12	ND(0.050)
	4/3/2012	47	27	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	ND(4.0)	26	240	ND(4.0)	26	80	ND(4.0)
	AP-25-DO	9/23/2004	NA	5.3	ND(0.050)	ND(0.050)	ND(0.050)	0.84	ND(0.10)	0.44	ND(0.10)	ND(0.25)	0.054	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)
12/29/2004		51	0.27	0.012	ND(0.0025)	0.0039	0.0051	ND(0.0050)	0.0068	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.050)J
5/2/2005		52	5.2J	ND(0.050)J	ND(0.050)J	ND(0.050)J	0.065J	ND(0.10)J	0.066J	ND(0.10)J	ND(0.25)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.10)J	ND(0.050)J	ND(0.020)
12/30/2005		52	2.2	0.036	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	0.074	ND(0.040)	ND(0.10)	0.13	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.050)
4/3/2006		47	7.1	0.14	ND(0.050)	ND(0.050)	0.16	ND(0.10)	0.32	ND(0.10)	ND(0.25)	0.058	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(1.0)
1/30/2007		52	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	19	130	ND(1.0)	ND(2.0)	ND(1.0)	ND(0.50)
4/10/2007		52	0.64	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	0.72	11	ND(0.50)	ND(1.0)	36	ND(1.0)
8/9/2007		36	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	ND(1.0)	ND(1.0)	ND(1.0)	14	91	0.023
11/12/2007		47	0.029	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	0.54	1.6	0.0047
1/23/2008		47	0.016	0.0049	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0026	0.012	ND(0.0010)	0.032	0.072	ND(0.10)J
4/21/2008		47	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.20)J	ND(0.10)J	ND(0.20)J	ND(0.50)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	8.1J	13J	ND(0.0010)J
7/28/2008		51	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0025J	0.010J	ND(0.0010)J	0.0038J	0.014J	ND(0.10)
10/22/2008		47	0.37	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	ND(0.10)	ND(0.10)	ND(0.10)	4.0	7.3	ND(0.0050)
1/14/2009		51	0.021	0.006	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0059	ND(0.0050)	0.56	0.62	ND(0.20)
4/2/2009		47	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	0.24	1.6	ND(0.20)	2.2	17	0.0073
10/26/2009		48	0.029	0.025	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0056	ND(0.0050)	ND(0.0050)	0.48	0.74	ND(0.0010)
1/28/2010		51	0.005	0.0054	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0025	0.01	ND(0.0010)	0.047	0.13	ND(0.10)J
7/14/2010		51	0.14J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	2.3J	12J	ND(0.040)
10/12/2010		47	0.054	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	1.8	3.7	ND(0.010)
1/4/2011		51	0.029	0.065	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.8	0.66	ND(0.010)
4/5/2011		46.7	0.011	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.012	0.062	ND(0.010)	0.13	0.45	ND(0.10)
7/28/2011		46	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	2.6	5.4	ND(0.040)
10/25/2011		51	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	1.6	2.7	ND(0.040)
1/17/2012		46	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.049	ND(0.040)	0.73	2.1	ND(1.0)J
4/3/2012		47	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	1.1	7.5D	ND(0.040)

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)
AP-26-DO	7/27/2004	NA	ND(1.0)J	ND(1.0)J	ND(1.0)J	ND(1.0)J	ND(1.0)J	ND(2.0)J	ND(1.0)J	ND(2.0)J	ND(5.0)J	29J	70J	ND(1.0)J	ND(2.0)J	ND(1.0)J	ND(0.0010)
	12/28/2004	64	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	65	0.0073	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0013	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)
	1/3/2006	65	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.54	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)
	5/17/2006	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.2	0.15	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.10)
	1/31/2007	65	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	8.4	11	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.0010)
	4/14/2007	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.20)
	11/16/2007	58	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	15	27	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.20)
	1/25/2008	68	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	13	26	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.20)
	4/28/2008	64	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	11	21	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.10)
	10/23/2008	64	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	5.0	9.2	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)
	4/3/2009	61	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	8.7	16	ND(0.20)	ND(0.20)	0.42	ND(0.10)
	10/26/2009	62	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	4.4	7.2	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)
	4/22/2010	64	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	13	25	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)J
	7/14/2010	64	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	9.2J	19J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.40)
	10/13/2010	61	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	8.7	21	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.20)
	4/5/2011	61.1	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	13	27D	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
	10/26/2011	64	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	11	25D	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.25)J
4/5/2012	61	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	11	27	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	
AP-27-DO	7/22/2004	NA	ND(0.25)J	ND(0.25)J	ND(0.25)J	ND(0.25)J	ND(0.25)J	ND(0.50)J	ND(0.25)J	ND(0.50)J	ND(1.3)J	14J	32J	ND(0.25)J	ND(0.50)J	0.82J	ND(0.0010)
	12/28/2004	61	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/3/2005	62	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0032	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/3/2006	62	ND(0.0010)	0.0042	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0011	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/7/2006	59	ND(0.0010)	0.0029	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0025)
	1/31/2007	62	ND(0.0025)	0.0055	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.26	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.010)	ND(0.0010)
	4/13/2007	62	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.022	0.073	ND(0.0010)	ND(0.0020)	0.0018	ND(0.0010)
	11/15/2007	60	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.021	0.042	ND(0.0010)	ND(0.0020)	0.0084	ND(0.025)
	4/25/2008	61	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.46	3.4	ND(0.025)	ND(0.050)	0.071	ND(0.050)
	10/22/2008	61	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.72	4.4	ND(0.050)	ND(0.10)	0.093	ND(0.0010)
	4/9/2009	60	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.003	0.019	ND(0.0010)	ND(0.0010)	0.0023	ND(0.0010)
	10/28/2009	57	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	0.022	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)
	4/21/2010	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0036	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0049
	10/14/2010	57.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.009	1.2D	ND(0.0020)	ND(0.0020)	0.01	ND(0.0020)J
	4/7/2011	57.2	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.0027	0.027	ND(0.0020)J	ND(0.0020)J	0.01	0.037
	10/26/2011	61	ND(0.0020)	ND(0.0020)	0.0027	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.17	12D	ND(0.0020)	0.0031	0.08	ND(0.0050)
	4/6/2012	57	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	13	13	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)
	AP-28-DO	12/30/2004	44	0.0058	0.01	0.016	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.65	ND(0.0050)	ND(0.010)	0.16
4/29/2005		41	0.0088	0.011	0.016	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.66	ND(0.0050)	ND(0.010)	0.17	ND(0.010)
3/29/2006		41	0.016	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.22	0.84	ND(0.010)	ND(0.020)	0.2	ND(0.010)
2/5/2007		45	ND(0.010)	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.24	0.91	ND(0.010)	ND(0.020)	0.21	ND(0.010)
4/15/2007		45	0.012	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.28	0.98	ND(0.010)	ND(0.020)	0.26	ND(0.010)
12/30/2004		44	ND(0.010)	ND(0.010)	0.014	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.22	0.85	ND(0.010)	ND(0.020)	0.21	ND(0.010)
4/29/2005		44	0.013	0.011	0.017	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.25	0.94	ND(0.010)	ND(0.020)	0.24	ND(0.010)
3/29/2006		43	0.02	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.29	1.1	ND(0.010)	ND(0.020)	0.29	ND(0.010)
2/5/2007		45	0.012	0.013	0.016	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.31	1.2	ND(0.010)	ND(0.020)	0.33	ND(0.010)
4/15/2007		45	0.014	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.37	1.2	ND(0.010)	ND(0.020)	0.34	ND(0.010)
11/13/2007		43	0.018	0.011	0.015	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.43	1.5	ND(0.010)	ND(0.020)	0.47	ND(0.020)
4/25/2008		44	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.49	1.8	ND(0.020)	ND(0.040)	0.48	ND(0.010)
4/2/2009		42	ND(0.010)	ND(0.010)	0.011	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.36	1.2	ND(0.010)	ND(0.010)	0.31	ND(1.2)



**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
AP-30-DO	2/12/2010	NA	ND(1.2)	ND(1.6)	ND(1.5)	ND(1.1)	ND(0.90)	ND(1.1)	ND(0.45)	ND(0.88)	ND(2.4)	82	330	---	ND(1.3)	ND(1.2)	ND(2.5)	
	5/24/2010	NA	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	59	680D	ND(2.5)	ND(2.5)	ND(2.5)	ND(0.050)J	
AP-30R-DO	4/7/2011	67	2.4J	ND(0.050)J	ND(0.050)J	ND(0.050)J	6.4DJ	ND(0.050)J	5.5DJ	ND(0.050)J	ND(0.050)J	0.47J	0.082J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.0020)	
	11/7/2011	27	0.085	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.19D	ND(0.0020)	0.18	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(1.2)	
	4/17/2012	88	0.22	ND(0.010)	ND(0.010)	ND(0.010)	0.7	ND(0.010)	0.27	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	
AP-31-DO	2/11/2010	NA	ND(1.2)	ND(1.6)	ND(1.5)	ND(1.1)	ND(0.90)	ND(1.1)	ND(0.45)	ND(0.88)	ND(2.4)	71	940D	---	ND(1.3)	ND(1.2)	ND(0.0040)	
	10/18/2010	89	1.3D	0.011	ND(0.0040)	ND(0.0040)	0.97D	ND(0.0040)	1.6D	ND(0.0040)	0.0062	0.053	0.015	0.0049	ND(0.0040)	ND(0.0040)	ND(0.0020)J	
	4/6/2011	30	1.6J	0.034J	ND(0.0020)J	ND(0.0020)J	0.68DJ	0.0028J	2.1DJ	ND(0.0020)J	0.007J	0.082J	0.0099J	0.009J	ND(0.0020)J	ND(0.0020)J	ND(0.020)	
	11/7/2011	38	1.8	0.041	ND(0.020)	ND(0.020)	0.52	ND(0.020)	1.9	ND(0.020)	ND(0.020)	0.043	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(1.2)	
	4/17/2012	88	1.3	0.045	ND(0.040)	ND(0.040)	0.27	ND(0.040)	1.7	ND(0.040)	ND(0.040)	1.9	43D	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	
AP-32-DO	2/11/2010	NA	ND(1.2)	ND(1.6)	ND(1.5)	ND(1.1)	ND(0.90)	ND(1.1)	ND(0.45)	ND(0.88)	ND(2.4)	91	950D	---	ND(1.3)	ND(1.2)	ND(0.10)	
	10/18/2010	89	2.3	ND(0.10)	ND(0.10)	ND(0.10)	1.2	ND(0.10)	6.8	ND(0.10)	ND(0.10)	0.2	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)J	
	4/7/2011	60	2.1J	ND(0.10)J	ND(0.10)J	ND(0.10)J	0.87J	ND(0.10)J	5.7J	ND(0.10)J	ND(0.10)J	6.2J	0.15J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(1.0)	
	11/7/2011	34	1.8	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	3.3	ND(1.0)	ND(1.0)	41	81D	ND(1.0)	ND(1.0)	ND(1.0)	ND(0.0010)	
	4/17/2012	88	1.4	ND(0.10)	ND(0.10)	ND(0.10)	0.55	ND(0.10)	2.4	ND(0.10)	ND(0.10)	62D	140D	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	
APBIO-01	8/2/2005	NA	ND(0.0010)	0.0013	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.019	0.066	ND(0.0010)	ND(0.0020)	0.054	ND(0.010)	
	1/6/2006	79	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.024	ND(0.010)	ND(0.020)	0.91	ND(0.010)	
	4/7/2006	79	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.011	0.077	ND(0.010)	ND(0.020)	0.85	ND(0.0050)	
	4/12/2007	78	ND(0.0050)	0.0086	0.0085	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.068	0.39	ND(0.0050)	0.033	0.53	0.0044	
	4/23/2008	77	ND(0.0020)	0.009	0.002	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0071	ND(0.0020)	0.093	0.16	0.0022	
	4/6/2009	78	ND(0.0020)	0.007	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.027	ND(0.0020)	0.092	0.29	ND(0.010)	
	4/23/2010	78	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.045	ND(0.010)	0.12	0.77	ND(0.010)	
	4/6/2011	77	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.023	ND(0.010)	0.16	0.8	ND(0.0020)	
	4/6/2012	77	ND(0.0050)	0.0084	0.012	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.024	0.076	ND(0.0050)	0.065	1.1D	ND(0.0050)
	B-2	4/27/2005	14	0.013	0.013	0.0026	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.031	0.2	ND(0.0020)	0.0072	0.091	0.0057
3/28/2006		12	ND(0.0050)	0.0079	0.006	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.014	0.42	ND(0.0050)	ND(0.010)	0.33	ND(0.0050)	
1/31/2007		17	ND(0.0050)	0.0054	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.013	0.43	ND(0.0050)	ND(0.010)	0.37	ND(0.025)	
4/14/2007		13	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	2.4	1.2	ND(0.025)	ND(0.050)	0.18	0.0016	
11/16/2007		11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.019	ND(0.0010)	0.012	0.065	0.0064	
4/25/2008		12	ND(0.0025)	0.0051	0.0048	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.0078	0.24	ND(0.0025)	ND(0.0050)	0.3	0.0054	
10/22/2008		12	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.16	ND(0.0050)	ND(0.010)	0.49	ND(0.0010)J	
4/9/2009		11	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.019J	ND(0.0010)J	ND(0.0010)J	0.022J	0.0049	
10/26/2009		11	ND(0.0025)	ND(0.0025)	0.0026	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.091	ND(0.0025)	ND(0.0025)	0.32	0.0056	
4/21/2010		12	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.29	ND(0.0050)	0.022	0.46	0.016	
10/14/2010		12	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.011	ND(0.010)	0.03	1.2D	0.007	
4/6/2011		15.7	ND(0.0040)	0.0044	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.092	ND(0.0040)	ND(0.0040)	0.23	0.0053	
10/27/2011		11.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.017	ND(0.0020)	0.19	0.18	ND(0.0020)	
4/6/2012		11.5	ND(0.0020)	ND(0.0020)	0.0025	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0069	0.27D	ND(0.0020)	ND(0.0020)	0.26D	0.0038
B-3		6/3/2002	15	0.42D	0.002	0.016	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.055	0.017	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/29/2003	15	0.088	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.041	0.008	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/13/2003	15	0.14	0.002	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.02	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/16/2003	15	0.05	0.001	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.008	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	
	5/2/2004	15	0.16	ND(0.0020)	0.0044	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.04	0.017	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0020)	
	4/27/2005	14	0.22	0.0021	0.0078	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.034	0.016	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0020)	
	3/31/2006	13	0.24	ND(0.0020)	0.012	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.063	0.02	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0010)	
	4/10/2007	15	0.11	0.0014	0.0036	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.027	0.021	ND(0.0010)	ND(0.0020)	0.001	ND(0.0010)J	
	4/21/2008	13	0.083J	0.0016J	0.0041J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.022J	0.014J	ND(0.0010)J	ND(0.0020)J	0.0020J	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
B-3 (Cont.)	10/22/2008	13	0.072	0.0017	0.0031	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.016	0.014	ND(0.0010)	ND(0.0020)	0.001	ND(0.0010)	
	4/3/2009	12.5	0.09	0.0017	0.0023	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.02	0.015	ND(0.0010)	ND(0.0010)	0.0011	ND(0.0010)	
	10/26/2009	12.5	0.044	0.0016	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.013	0.0095	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/21/2010	14	0.056	0.001	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0062	0.01	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	
	10/12/2010	12.5	0.049	0.0021	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.016	0.011	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/4/2011	12.5	0.042	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.015	0.0068	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	10/26/2011	12	0.069	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.016	0.013	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/3/2012	12.5	0.065	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.023	0.011	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
BR-1_ZONE1	5/16/2003	205	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	ND(0.010)	ND(0.010)	0.011	0.018	ND(0.0020)	ND(0.0020)	0.1	0.0011	
	12/29/2003	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)	0.057	0.092	ND(0.0010)	0.005	0.16DD	ND(0.0010)	
	1/5/2005	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0020)	ND(0.0050)	0.032	0.046	ND(0.0010)	0.03	0.053	ND(0.0010)	
	5/3/2005	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0014	ND(0.0020)	ND(0.0050)	0.0025	0.0036	ND(0.0010)	0.028	0.063	ND(0.0010)	
	1/5/2006	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0013	ND(0.0010)	0.018	0.026	ND(0.0010)	
	4/3/2006	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.001	ND(0.0010)	0.0037	0.014	ND(0.0010)
	4/12/2007	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0020)	0.0026	ND(0.0010)
	8/9/2007	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0029	ND(0.0010)	
	11/15/2007	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	0.0011	ND(0.0010)
	4/24/2008	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/6/2009	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	0.0016	0.009
	10/29/2009	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.028	0.067	ND(0.0010)	0.083	0.20D	ND(0.0010)	
	4/22/2010	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0033
	10/18/2010	205	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.013	0.042	ND(0.0020)	0.036	0.11	0.027	
	4/14/2011	205	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.056	ND(0.020)	0.43	1.5	0.0031
	10/24/2011	205	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.01	0.035	ND(0.0020)	0.041	0.19	0.006	
	4/2/2012	205	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	BR-1_ZONE2	5/16/2003	152	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.010)	0.04	0.30D	ND(0.0020)	ND(0.0020)	0.21	0.0053
12/29/2003		152	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.013)	ND(0.0025)	0.012	ND(0.0025)	ND(0.0050)	0.36	ND(0.0010)	
1/5/2005		152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	0.022	ND(0.0010)
5/3/2005		152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0032	0.027	0.0033	
1/5/2006		152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0024	ND(0.0010)	0.0033	0.013D	ND(0.0010)
4/3/2006		152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	0.0055	0.021	ND(0.0010)
4/12/2007		152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0020)	0.004	ND(0.0010)
8/9/2007		152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0020)	0.0069	ND(0.0010)
11/15/2007		152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0020)	0.0033	ND(0.0010)
4/24/2008		152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
4/6/2009		152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
10/29/2009		152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.0024	0.042	ND(0.0010)
4/22/2010		152	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0065
10/18/2010		152	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	0.013	0.23D	ND(0.0020)
4/14/2011		152	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0046	ND(0.0020)	0.012	0.095	0.0031
10/24/2011		152	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	ND(0.0020)	0.016	0.2	ND(0.0020)
4/2/2012		152	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
BR-1_ZONE3		5/16/2003	105	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.003	0.0094
	12/29/2003	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.013	ND(0.0010)	ND(0.0020)	0.36DD	ND(0.0010)
	1/5/2005	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/3/2005	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	0.0065	ND(0.0010)
	1/5/2006	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0053	ND(0.0010)



**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
BR-5_ZONE1 (Cont.)	5/3/2005	209	ND(0.0025)	ND(0.0025)	0.01	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.17	ND(0.0025)	0.13	0.33	ND(0.0010)	
	1/5/2006	209	ND(0.0010)	ND(0.0010)	0.004	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.05	ND(0.0010)	0.041	0.092	ND(0.0010)	
	4/3/2006	209	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.005	ND(0.0010)	0.0076	0.0088	ND(0.0010)	
	4/16/2007	209	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0027	ND(0.0010)	ND(0.0020)	0.0062	ND(0.0010)	
	11/14/2007	209	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0020)	0.0051	ND(0.0010)	
	4/24/2008	209	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0020)	0.0015	ND(0.0025)	
	4/7/2009	209	ND(0.0025)	ND(0.0025)	0.0069	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.055	ND(0.0025)	0.062	0.077	ND(0.0010)	
	4/28/2010	209	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0014	ND(0.0020)	
	4/14/2011	209	ND(0.0020)	ND(0.0020)	0.0055	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.047	ND(0.0020)	0.039	0.094	0.01	
4/4/2012	209	ND(0.0050)	ND(0.0050)	0.021	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.21	ND(0.0050)	0.32	0.48D	ND(0.0050)		
BR-5_ZONE2	6/3/2002	172	ND(0.010)	0.01	0.02	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.05	0.34	ND(0.020)	2.2	2.1	0.004	
	1/31/2003	172	ND(0.0020)	0.003	0.032	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.12	0.22	ND(0.0020)	0.60DD	0.80DD	ND(0.0050)	
	5/16/2003	172	ND(0.0050)	ND(0.0050)	0.016	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	0.032	0.051	ND(0.010)	0.80D	1.1	ND(0.010)		
	12/19/2003	172	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.08	ND(0.010)	0.5	1.0	ND(0.010)	
	5/4/2004	172	ND(0.010)	ND(0.010)	0.012	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.011	0.24	ND(0.010)	0.35	1.2	0.0025	
	1/5/2005	172	ND(0.0025)	ND(0.0025)	0.011	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.037	0.15	ND(0.0025)	0.16	0.33	ND(0.010)	
	5/3/2005	172	ND(0.010)	ND(0.010)	0.014	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.023	0.3	ND(0.010)	0.26	0.72	ND(0.0050)	
	1/5/2006	172	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.014	0.13	ND(0.0050)	0.13	0.35	ND(0.0010)	
	4/3/2006	172	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.011	ND(0.0010)	0.018	0.048	ND(0.0010)	
	4/16/2007	172	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0020)	0.0054	ND(0.0010)	
	11/14/2007	172	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0032	ND(0.0010)	ND(0.0020)	0.0043	ND(0.0010)	
	4/24/2008	172	ND(0.0010)	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.003	ND(0.0010)	0.0097	0.032	ND(0.0050)	
	4/7/2009	172	ND(0.0050)	ND(0.0050)	0.0095	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.17	ND(0.0050)	0.18	0.43	0.0013	
	4/28/2010	172	ND(0.0010)	0.0021	0.0045	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	0.078	ND(0.0010)	0.089	0.064D	0.002	
	4/14/2011	172	ND(0.0020)	0.0025	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0047	0.21D	ND(0.0020)	0.21D	0.34D	ND(0.050)	
4/4/2012	172	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0025	ND(0.0020)	0.0062	0.012	ND(0.0020)		
BR-5_ZONE3	6/3/2002	133	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.32	0.76	ND(0.10)	2.0	1.6	ND(0.0020)	
	1/31/2003	133	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.004	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002		
	5/16/2003	133	ND(0.0020)	ND(0.0020)	0.016	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.010)	0.002	0.12	ND(0.0040)	0.30D	0.32	ND(0.0010)	
	12/19/2003	133	ND(0.0010)	0.0044	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0012	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/4/2004	133	ND(0.0010)	0.0036	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0025)	
	5/3/2005	133	ND(0.0025)	0.0025	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.018	0.026	ND(0.0025)	0.066	0.19	ND(0.010)
	1/5/2006	133	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.014	0.088	ND(0.010)	0.28	0.92	ND(0.0025)	
	4/3/2006	133	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0045	ND(0.0025)	0.007	0.19	ND(0.0010)	
	4/16/2007	133	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0022	ND(0.0010)	ND(0.0020)	0.005	ND(0.0025)	
	11/14/2007	133	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.0052	0.065	ND(0.0025)	0.13	0.51D	ND(0.0020)	
	4/24/2008	133	ND(0.0020)	0.0024	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0024	0.029	ND(0.0020)	0.03	0.18	ND(0.0025)	
	4/7/2009	133	ND(0.0025)	0.0028	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0063	0.048	ND(0.0025)	0.029	0.18	0.013	
	4/14/2011	133	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.14	0.77	ND(0.010)	0.17	5.0D	ND(0.0020)	
	4/4/2012	133	ND(0.0020)	0.0061	0.0039	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.064	0.27D	ND(0.0020)	0.093	0.83D	0.0036	
	BR-6_ZONE1	12/19/2003	94	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.003	ND(0.0020)	0.14	0.13	ND(0.0025)
1/5/2005		94	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.026	0.19	ND(0.0050)	
5/3/2005		94	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.0079	ND(0.0050)	0.017	0.36	ND(0.0025)	
1/5/2006		94	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0073	ND(0.0025)	0.024	0.29	ND(0.0025)	
4/3/2006		94	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0053	ND(0.0025)	0.035	0.28	0.0021	
4/13/2007		94	ND(0.0020)	0.0036	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0044	ND(0.0020)	0.079	0.27	ND(0.0010)	
11/14/2007		94	ND(0.0010)	0.0036	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohier Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)
BR-6_ZONE1 (Cont.)	4/25/2008	94	ND(0.0020)	0.0026	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0048	ND(0.0020)	0.054	0.15	0.0015
	10/23/2008	94	ND(0.0010)	0.0031	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0020)	ND(0.0010)	ND(0.0010)	0.0056	0.011	ND(0.0025)
	4/7/2009	94	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.058	0.22	ND(0.0025)
	11/2/2009	94	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.047	0.22	0.0014
	4/28/2010	94	ND(0.0010)	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0084	0.0075	ND(0.0020)
	10/18/2010	94	ND(0.0020)	0.0021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.015	0.17	ND(0.0050)
	4/19/2011	94	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.024	0.26D	ND(0.0020)
	10/27/2011	94	ND(0.0020)	0.0023	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.024	0.20D	ND(0.0050)
	4/2/2012	94	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0035	ND(0.0020)
	BR-6_ZONE2	12/19/2003	62	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.012	ND(0.0050)	0.021	0.39
1/5/2005		62	ND(0.0025)	0.0026	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0077	ND(0.0025)	0.016	0.3	ND(0.0025)
5/3/2005		62	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0062	ND(0.0025)	0.055	0.24	ND(0.0025)
1/5/2006		62	ND(0.0025)	0.0026	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.012	ND(0.0025)	0.016	0.33	ND(0.0025)
4/3/2006		62	ND(0.0025)	0.004	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0095	ND(0.0025)	0.038	0.37	ND(0.0050)
4/13/2007		62	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.017	ND(0.0050)	0.018	0.46	0.0011
11/14/2007		62	ND(0.0010)	0.004	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0025)
4/25/2008		62	ND(0.0025)	0.003	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.009	ND(0.0025)	0.013	0.31	0.0014
10/23/2008		62	ND(0.0010)	0.0032	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0046	0.011	ND(0.0025)
4/7/2009		62	ND(0.0025)	0.0025	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0052	ND(0.0025)	0.013	0.31	ND(0.0025)
11/2/2009		62	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.04	0.21	ND(0.0025)
4/28/2010		62	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.014	0.3	ND(0.0050)
10/18/2010		62	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.046	0.31	ND(0.013)
4/19/2011		62	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	ND(0.013)	0.023	0.37	ND(0.0050)
10/27/2011		62	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.021	0.4	ND(0.0025)
4/2/2012		62	ND(0.0020)	0.0022	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.11	0.19D	ND(0.0020)
BR-6_ZONE3		12/22/2003	42	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.014	ND(0.0025)	0.03	0.31
	2/17/2005	42	ND(0.0010)	0.0025	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	0.0042	0.045	ND(0.0025)
	5/3/2005	42	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0061	ND(0.0025)	0.039	0.21	ND(0.0025)
	1/5/2006	42	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0092	ND(0.0025)	0.023	0.29	ND(0.0025)
	4/3/2006	42	ND(0.0025)	0.003	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.013)	ND(0.0025)	0.0049	ND(0.0025)	0.019	0.28	ND(0.0010)
	4/13/2007	42	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0036	ND(0.0010)	0.046	0.11	0.001
	11/14/2007	42	ND(0.0010)	0.0031	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.028	0.031	0.0022
	4/25/2008	42	ND(0.0020)	0.0024	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.010)	ND(0.0020)	0.0025	ND(0.0020)	0.044	0.2	0.0038
	10/23/2008	42	ND(0.0025)	0.0029	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.028	0.26	0.0026
	4/7/2009	42	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.06	0.15	ND(0.0010)
	11/2/2009	42	ND(0.0010)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0024	0.0012
	4/28/2010	42	ND(0.0010)	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.038	0.04	ND(0.0020)
	10/18/2010	42	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0035	0.0057	ND(0.0050)
	4/19/2011	42	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0076	ND(0.0020)
	10/27/2011	42	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.017	0.061	ND(0.0050)
	4/2/2012	42	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	BR-7_ZONE1	12/22/2003	152	ND(0.0050)	0.016	0.01	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.0054	ND(0.0050)	0.22	0.59
1/14/2005		152	ND(0.0020)	0.0066	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	0.22	ND(0.0010)
1/4/2006		152	ND(0.0010)	0.0055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	0.074	0.1	0.0012
4/20/2007		152	ND(0.0010)	0.0067	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.014	0.076	0.0013
5/8/2008		152	ND(0.0010)	0.0073	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.036	0.12	ND(0.0010)
4/7/2009		152	ND(0.0010)	0.0069	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.11	0.085	ND(0.0020)

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
BR-7_ZONE1 (Cont.)	4/28/2010	152	ND(0.0020)	0.0072	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.18	0.13	ND(0.0020)
	4/14/2011	152	ND(0.0020)	0.0034	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.051	0.012	ND(0.0050)
	4/4/2012	152	ND(0.0020)	0.0069	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.12	0.0048	ND(0.0020)
BR-7_ZONE2	12/22/2003	112	ND(0.0050)	0.013	0.0094	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.16	0.67	ND(0.010)
	1/14/2005	112	ND(0.010)	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.028	0.91	ND(0.010)
	1/4/2006	112	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	0.72	0.0012	
	4/20/2007	112	ND(0.0010)	0.013	0.0044	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.10DD	0.23DD	ND(0.0010)
	5/8/2008	112	ND(0.0010)	0.012	0.0036	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.28	0.26	ND(0.0050)
	4/7/2009	112	ND(0.0050)	0.0055	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.048	0.47	ND(0.0050)
	4/28/2010	112	ND(0.0050)	0.0054	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.039	0.5	ND(0.0040)
	4/14/2011	112	ND(0.0040)	0.0064	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.15	0.2	0.0032
	4/4/2012	112	ND(0.0040)	0.0069	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.2	0.0093	ND(0.0040)
	BR-7_ZONE3	12/22/2003	69	ND(0.0020)	0.0098	0.0024	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.096	0.14
1/14/2005		69	ND(0.010)	0.015	0.02	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.027	1.1	ND(0.010)
1/4/2006		69	ND(0.010)	0.011	0.011	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.032	0.95	0.0037
4/20/2007		69	ND(0.0025)	0.011	0.0037	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.13	0.3	0.019
5/8/2008		69	ND(0.0010)	0.016	0.021	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.011	ND(0.0010)	ND(0.0010)	0.039	1.2D	ND(0.010)
4/7/2009		69	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.029	0.84	ND(0.010)
4/28/2010		69	ND(0.010)	ND(0.010)	0.012	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.021	1	ND(0.020)
4/14/2011		69	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.036	1.1	ND(0.0010)
4/4/2012		69	ND(0.010)	ND(0.010)	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.069	0.74	ND(0.010)
BR-8_ZONE1		12/29/2003	222	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
BR-8_ZONE2	12/29/2003	205	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
BR-8_ZONE3	12/29/2003	183	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
BW-01	4/10/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0034	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0012	0.0012	ND(0.0010)
	7/19/2007	13.45	0.011	0.0056	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0026	ND(0.0050)	0.002	0.0077	ND(0.0010)	ND(0.0020)	0.014	0.037	ND(0.0010)
	11/12/2007	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0062	0.0056	ND(0.0010)	ND(0.0020)	0.011	ND(0.0010)	
	1/24/2008	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0047	0.0017	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0010)	
	4/21/2008	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0047	0.0010	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	7/28/2008	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0061	0.0027	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	10/21/2008	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0023	0.0017	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/13/2009	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/2/2009	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	7/14/2009	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0025	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/27/2009	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0036	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	1/28/2010	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/22/2010	14	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.013	0.0073	ND(0.0050)	0.13	0.44	ND(0.0010)	
	1/30/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.006	0.011	ND(0.0010)	ND(0.0020)	0.0052	ND(0.0010)	
	4/10/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0021	0.0014	ND(0.0010)	ND(0.0020)	0.0026	ND(0.0020)	
7/19/2007	14.5	0.013	0.012	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0074	ND(0.0020)	0.055	0.14	ND(0.0010)		
11/12/2007	13.3	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0077	0.01	ND(0.0010)	ND(0.0020)	0.0096	ND(0.0010)		
1/24/2008	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0048	0.0014	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)		
4/21/2008	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0018	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0018	ND(0.0010)		
7/28/2008	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0058	0.0016	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)		
10/21/2008	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0028	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)		
1/13/2009	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)		
4/2/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)		

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
BW-02 (Cont.)	7/14/2009	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0037	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/27/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0028	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	1/28/2010	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/22/2010	14	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.12	0.4	ND(0.0010)	
BW-03	1/30/2007	16.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0044	0.0021	ND(0.0010)	ND(0.0020)	0.0087	ND(0.0010)	
	4/10/2007	16.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0029	ND(0.0010)	
	7/19/2007	14.5	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	1.6	1.1	ND(0.0010)	
	11/12/2007	13.4	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.011	0.014	ND(0.0010)	0.0022	0.021	ND(0.0010)	
	1/24/2008	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.006	0.0028	ND(0.0010)	ND(0.0020)	0.002	ND(0.0010)	
	4/21/2008	13	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0012J	ND(0.0010)J	ND(0.0020)J	0.0040J	ND(0.0010)J	
	7/28/2008	15.5	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0066J	0.0019J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J	
	10/21/2008	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0019	0.0019	ND(0.0010)	ND(0.0020)	0.0012	ND(0.0010)	
	1/13/2009	15.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/2/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	7/14/2009	15.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0011	ND(0.0010)	
	10/27/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.003	0.0018	ND(0.0010)	0.0037	0.0029	ND(0.0010)	
	1/28/2010	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/22/2010	15.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.04	0.11	ND(0.020)	
	8/21/2012	15.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0087	0.0026	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0064	0.0039	ND(0.0020)	
	BW-04	1/30/2007	14	0.046	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	1.7	1.3	ND(0.0025)
		4/10/2007	14	0.23	0.006	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	0.0053	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.1	0.052	ND(0.0010)
7/19/2007		13.2	0.088	0.01	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0018	ND(0.0020)	ND(0.0050)	0.0023	0.0038	0.001	0.0043	0.0037	ND(0.0010)	
11/12/2007		12.5	0.0038	0.0081	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0015	0.003	0.003	0.072	0.025	ND(0.0010)	
1/22/2008		12	0.077	0.0074	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0013	ND(0.0020)	ND(0.0050)	0.003	0.0012	ND(0.0010)	0.0043	0.014	ND(0.0050)J	
4/21/2008		12	0.471	0.044J	0.0097J	ND(0.0050)J	ND(0.0050)J	ND(0.010)J	ND(0.0050)J	ND(0.010)J	ND(0.025)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	0.24J	0.34J	0.0010J	
7/28/2008		18	0.015J	0.0029J	0.0011J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.024J	0.0074J	ND(0.0010)J	0.036J	0.11J	ND(0.0010)	
10/21/2008		12	0.038	0.02	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	0.0032	0.0041	ND(0.0010)	
1/13/2009		13	0.0011	0.0028	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.0095	0.065	ND(0.0050)	
4/2/2009		12	0.0054	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.54	0.48	ND(0.0050)	
7/14/2009		13	0.0051	0.005	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.59	0.15	ND(0.0025)	
10/27/2009		12	0.05	0.035	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.3	0.02	ND(0.0010)	
1/28/2010		12	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	0.012	0.016	ND(0.010)	
4/22/2010		13	0.022	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.74	0.51	ND(0.0010)J	
7/14/2010		13	ND(0.0010)J	0.0016J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.0014J	ND(0.0010)J	ND(0.0010)J	0.013J	0.0075J	ND(0.0020)	
10/12/2010		13	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0027	0.0044	ND(0.0020)	
1/4/2011		13	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0024	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.016	0.0081	ND(0.0020)	
4/5/2011		12.5	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.16	0.069	ND(0.0040)	
7/28/2011		13	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.21	0.066	ND(0.0020)	
10/25/2011		12	0.095	0.032	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0023	ND(0.0020)	ND(0.0020)	0.098	0.0031	ND(0.0020)	
1/18/2012		12.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0050)	
4/3/2012		12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
8/21/2012		12.3	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.40D	0.16D	ND(0.0020)	
BW-05	1/30/2007	16	0.14	0.035	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.013	ND(0.0050)	0.65	0.18	ND(0.0050)	
	4/10/2007	16	0.56	0.017	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.0076	ND(0.010)	ND(0.025)	0.005	ND(0.0050)	ND(0.0050)	0.073	0.059	0.0026	
	7/19/2007	13.3	0.24	0.034	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0026	ND(0.0020)	0.018	0.013	ND(0.0010)	
	11/12/2007	12.5	0.0028	0.0039	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0012	0.0019	0.0015	ND(0.0020)	0.0015	ND(0.0050)	
	1/22/2008	10	4.2	0.26	0.16	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	ND(0.050)	ND(0.050)	ND(0.050)	1.2	2.6	ND(0.050)J	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)
BW-05 (Cont.)	4/21/2008	10	3.9J	0.58J	0.15J	ND(0.050)J	ND(0.050)J	ND(0.10)J	ND(0.050)J	ND(0.10)J	ND(0.25)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	2.4J	6.9J	ND(0.050)J
	7/28/2008	15	0.68J	ND(0.050)J	0.12J	ND(0.050)J	ND(0.050)J	ND(0.10)J	ND(0.050)J	ND(0.10)J	ND(0.25)J	0.38J	0.32J	ND(0.050)J	2.9J	6.6J	0.0034
	10/21/2008	9	0.042	0.25	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	0.0021	ND(0.050)
	1/13/2009	15	0.16	0.099	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	5.3	2.8	ND(0.0010)
	4/2/2009	9	0.019	0.018	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.004	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.0045	0.021	0.015	ND(0.0010)
	7/14/2009	15	0.018	0.011	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0064	0.002	0.002	0.0013	ND(0.0010)	ND(0.0020)
	10/27/2009	9	0.0043	0.17	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0021	0.0025	ND(0.0020)	ND(0.0010)
	1/28/2010	9	ND(0.0010)	0.02	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.0047	0.074	0.011	ND(0.010)
	4/22/2010	15	0.33	0.02	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.014	ND(0.010)	ND(0.010)	0.73	0.67	ND(0.0010)J
	7/14/2010	15	ND(0.0010)J	0.0059J	ND(0.0010)J	0.0023J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.0010J	0.0050J	ND(0.0010)J	0.052J	0.066J	ND(0.0020)
	10/12/2010	10	ND(0.0020)	0.0041	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/4/2011	15	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0047	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)
	4/5/2011	9.5	0.022	0.013	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.86	0.22	ND(0.0020)
	7/28/2011	9	ND(0.0020)	0.0049	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0027	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/25/2011	9	1.5D	4.3D	0.02	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0047	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	0.97D	0.064	ND(0.0020)
	1/18/2012	9.5	ND(0.0020)	0.021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.024	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/3/2012	9	ND(0.0020)	0.0021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
8/21/2012	9.4	0.0022	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.019	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0027	ND(0.0020)	ND(0.0020)	0.02	0.014	ND(0.0020)
BW-06	7/28/2011	13	0.024	0.038	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	ND(0.0020)	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0020)	0.0059	ND(0.0020)	ND(0.0020)
	10/25/2011	13	3.5D	1.1D	0.06	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.017	ND(0.0020)	0.027	0.019	ND(0.0020)	0.92D	0.1	ND(0.0020)	
	1/18/2012	13	0.0027	0.14	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	1.1D	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	
	4/3/2012	13	ND(0.0050)	0.012	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.38	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	
8/21/2012	13.3	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0065	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0045	0.0027	ND(0.0020)	
BW-08	4/10/2007	16	0.014	0.61	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.015	ND(0.0050)	ND(0.010)
	7/19/2007	13.2	1.1	0.45	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.013	0.052	ND(0.010)	0.4	0.2	ND(0.0010)
	11/12/2007	13.7	0.0059	0.076	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0046	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0021	ND(0.0020)	0.0012	ND(0.0010)
	1/22/2008	14	ND(0.0010)	0.022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.025)J
	4/21/2008	14	3.2J	0.87J	0.14J	ND(0.025)J	ND(0.025)J	ND(0.050)J	ND(0.025)J	0.055J	ND(0.13)J	ND(0.025)J	0.034J	ND(0.025)J	0.80J	0.95J	0.025J
	7/28/2008	15	0.13J	2.0J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.050)J	ND(0.025)J	0.14J	ND(0.13)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	2.2J	0.90J	ND(0.020)
	10/21/2008	14	ND(0.020)	1.8	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	1.4	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.010)
	1/13/2009	15	0.39	0.42	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.096	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.78	0.072	ND(0.0020)
	4/2/2009	13	ND(0.0020)	0.02	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.25	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	ND(0.0020)	ND(0.0020)	ND(0.0010)
	7/14/2009	15	0.023	0.031	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.13J	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0088	ND(0.0010)	ND(0.0010)	ND(0.010)
	10/27/2009	13	ND(0.010)	0.046	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	1.0	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.0050)
	1/28/2010	13	0.0053	0.05	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.41	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0058	ND(0.0050)	ND(0.020)
	4/22/2010	15	2.4	0.12	0.13	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.047	ND(0.020)	0.075	0.098	ND(0.020)	1.8	2.2	ND(0.0050)J
	7/14/2010	15	0.59J	0.56J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	0.090J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	0.045J	0.024J	ND(0.0020)
	10/12/2010	14	ND(0.0020)	0.013	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.045	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/5/2011	15	ND(0.0020)	0.031	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.051	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)
	4/5/2011	13.7	0.09	0.037	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.053	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.72	0.19	0.0023
	7/28/2011	13	ND(0.0020)	0.13	ND(0.0020)	0.0031	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.14	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/25/2011	13.5	0.12	0.73D	0.0031	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.24D	ND(0.0020)	0.0096	0.017	ND(0.0020)	0.30D	0.012	ND(0.0020)
1/18/2012	13.5	ND(0.0020)	3.5D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.95D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
4/3/2012	13	0.018	0.077	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	2.0D	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	
8/21/2012	14	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0054	0.018	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
BW-09	4/10/2007	16	0.0036	0.18	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	0.0064	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)
	8/9/2007	12	0.24	0.46	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	0.42	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.056	0.049	ND(0.0025)
	11/12/2007	11.8	0.014	0.22	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	0.065	ND(0.013)	ND(0.0025)	ND(0.0025)	0.0025	0.0053	0.0029	ND(0.0010)



**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
BW-09 (Cont.)	1/22/2008	12	0.0033	0.019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.020)J	
	4/21/2008	12	2.2J	0.51J	0.086J	ND(0.020)J	ND(0.020)J	ND(0.040)J	ND(0.020)J	0.093J	ND(0.10)J	0.027J	0.054J	ND(0.020)J	0.52J	0.58J	ND(0.010)J	
	7/28/2008	15	0.27J	1.4J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	0.094J	ND(0.050)J	ND(0.010)J	0.031J	ND(0.010)J	0.77J	0.46J	ND(0.020)	
	10/21/2008	12	ND(0.020)	0.31	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	2.0	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.0025)	
	1/13/2009	15	0.17	0.22	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.25	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.16	0.019	ND(0.0020)	
	4/2/2009	11	0.0022	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.19	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0024	ND(0.0020)	ND(0.0020)	0.0013	
	7/14/2009	15	0.0051	0.017	ND(0.0010)	0.0024	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.14J	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0087	ND(0.0010)	ND(0.0010)	ND(0.0050)	
	10/27/2009	11	ND(0.0050)	0.017	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.62	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0072	ND(0.0050)	ND(0.0050)	ND(0.0050)	
	1/28/2010	11	0.0062	0.07	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.46	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.018	ND(0.0050)	ND(0.010)	
	4/22/2010	15	0.33	0.16	0.026	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.059	ND(0.010)	ND(0.010)	ND(0.010)	0.022	ND(0.010)	1.2	1.0	ND(0.0040)
	7/28/2011	12.5	ND(0.0040)	0.13	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.22	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0020)
	10/25/2011	12	0.0094	0.062	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.092	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)
	1/18/2012	12	0.012	1.1D	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	3.6D	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.010)
	4/3/2012	12	0.0067	0.013	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	1.7D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	8/21/2012	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0046	0.11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	CLO2-BR	6/3/2002	60	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.08	1.3	ND(0.020)	ND(0.020)	0.04	ND(0.010)
		6/3/2002	83	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.11	1.3	ND(0.020)	ND(0.020)	0.22	ND(0.0050)
1/23/2003		83	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	0.051	0.75	ND(0.010)	ND(0.010)	0.12	ND(0.0050)	
5/14/2003		83	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	0.045	0.65	ND(0.010)	ND(0.010)	0.075	ND(0.0050)		
12/18/2003		83	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.58	ND(0.0050)		
5/2/2004		82	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.06	0.3	ND(0.0050)	ND(0.010)	0.4	ND(0.0050)	
12/29/2004		81	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.012	ND(0.0050)	0.045	0.47	ND(0.0025)	
4/29/2005		81	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.033	0.35	ND(0.0025)	ND(0.0050)	0.054	ND(0.0050)	
1/4/2006		83	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.0058	ND(0.0050)	0.013	0.37	ND(0.0025)	
3/31/2006		84	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.026	ND(0.0025)	0.015	0.28	ND(0.0025)	
2/1/2007		82	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0025)	ND(0.013)	ND(0.0025)	0.016	ND(0.0025)	0.05	0.21	ND(0.0010)	
4/11/2007		42	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0024	
11/14/2007		54	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0073	ND(0.0020)	0.044	0.25	ND(0.0020)	
4/24/2008		43	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.026	0.2	ND(0.0020)	ND(0.0040)	0.17	ND(0.0025)	
10/23/2008		42	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.074	ND(0.0025)	0.017	0.27	ND(0.0020)J	
4/27/2009		42	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.011J	0.086J	ND(0.0020)J	ND(0.0020)J	0.16J	ND(0.0020)	
10/26/2009		75	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.039	0.2	ND(0.0020)	
4/21/2010		42	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.084	0.15	ND(0.0020)	
10/18/2010		42	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0038	0.0033	ND(0.0020)	
10/24/2011		42	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0097	0.035	ND(0.10)	
4/3/2012	41.5	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.011	ND(0.0040)	0.011	0.2	ND(0.0040)		
CLO3-BR	6/3/2002	95	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	2.5	21	ND(0.20)	ND(0.20)	8.8	ND(0.10)	
	6/3/2002	111	ND(0.10)	ND(0.10)	0.1	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	3.3	32E	ND(0.20)	ND(0.20)	14	ND(0.0020)	
	1/29/2003	111	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.006	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/14/2003	111	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/18/2003	111	ND(0.0010)	0.0055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/29/2005	111	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0059	0.0026	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	3/29/2006	111	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0054	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/14/2007	111	ND(0.0010)	0.004	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.034	0.014	ND(0.0010)	ND(0.0020)	ND(0.0010)	
4/24/2008	109	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.015	0.01	ND(0.0010)	ND(0.0020)	ND(0.0010)		

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
CL03-DO	6/3/2002	80	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	4.5	30	ND(0.20)	ND(0.20)	12	ND(0.0020)	
	1/29/2003	80	ND(0.0020)	0.016	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/14/2003	80	ND(0.0020)	0.026	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/18/2003	80	ND(0.0010)	0.02	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	5/1/2004	78	ND(0.0010)	0.034	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/29/2005	77	ND(0.0010)	0.029	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	3/29/2006	80	ND(0.0010)	0.036	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/14/2007	80	ND(0.025)	0.032	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.49	3.1	ND(0.025)	ND(0.050)	2.5	ND(0.0010)	
	11/14/2007	77	ND(0.0010)	0.036	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	0.008	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/24/2008	78	ND(0.0010)	0.037	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	10/20/2008	79	ND(0.0010)	0.035	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/2/2009	75	ND(0.0010)	0.033	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/27/2009	75	ND(0.010)	0.057	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.43	0.23	ND(0.010)	ND(0.010)	0.072	
	4/20/2010	79	ND(0.0010)	0.035	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.083	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/14/2010	76	ND(0.0020)	0.036	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/4/2011	75	ND(0.0020)	0.03	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.069	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
10/27/2011	79	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0089	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0034		
4/6/2012	76	ND(0.020)	0.035	0.024	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	6.0D	15D	ND(0.020)	0.29	6.9D	ND(0.020)		
CL03-S	6/3/2002	20	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	1/29/2003	20	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/14/2003	20	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.005	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/17/2003	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/1/2004	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/29/2005	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.004	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/29/2006	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0036	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/14/2007	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/24/2008	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0025	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	10/20/2008	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/20/2010	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/4/2011	18	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0038	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/6/2012	18	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0043	0.0075	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	CL04-BR	6/3/2002	40	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.055	0.065	ND(0.0020)	ND(0.0020)	0.094	ND(0.0020)
		6/3/2002	55	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.023	0.04	ND(0.0020)	ND(0.0020)	0.089	ND(0.0020)
		5/14/2003	55	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.04	0.03	ND(0.0020)	ND(0.0020)	0.16	ND(0.0010)
12/16/2003		55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.018	0.022	ND(0.0010)	0.0036	0.13	ND(0.0010)	
4/26/2004		55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.015	0.013	ND(0.0010)	ND(0.0020)	0.076	ND(0.0010)	
4/28/2005		55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0035	0.0071	ND(0.0010)	ND(0.0020)	0.046	ND(0.0010)	
3/28/2006		57.8	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0011	0.01	ND(0.0010)	0.0032	0.043	ND(0.0010)	
4/11/2007		55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.008	ND(0.0010)	ND(0.0020)	0.021	ND(0.0010)	
4/21/2008		54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0059	ND(0.0010)	ND(0.0020)	0.016	ND(0.0010)	
4/3/2009		54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0045	ND(0.0010)	ND(0.0010)	0.017	ND(0.0010)	
4/21/2010		54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0048	ND(0.0010)	0.0014	0.023	ND(0.0020)	
4/6/2011		54	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.023	
4/4/2012		54.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.036	0.0021

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)
CL04-DO	6/3/2002	28	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.005	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/14/2003	28	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.012	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/16/2003	28	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0041	ND(0.0010)	ND(0.0020)	0.0034	ND(0.0010)
	4/26/2004	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.021	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/28/2005	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.019	ND(0.0010)	ND(0.0020)	0.0011	ND(0.0010)
	3/28/2006	27.8	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0011	0.0063	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0072	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/21/2008	28	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0018J	0.020J	ND(0.0010)J	ND(0.0020)J	0.0017J	ND(0.0010)
	4/3/2009	27	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0015	0.019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/21/2010	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0014	0.0083	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/6/2011	27	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.10)
	4/4/2012	27.3	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0022	0.031	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
CL05-DOA	6/3/2002	40	3.4	0.7	0.5	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	64D	140D	ND(0.20)	ND(0.20)	3.7	ND(1.0)
	6/3/2002	55	4.0	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	75	200	ND(2.0)	ND(2.0)	5.0	ND(0.10)
	1/29/2003	55	10	0.1	ND(0.10)	ND(0.10)	0.6	ND(0.10)	0.2	ND(0.50)	ND(0.20)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.020)
	5/13/2003	55	4.3	0.1	ND(0.020)	ND(0.020)	0.31	ND(0.020)	0.09	ND(0.10)	ND(0.040)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.040)	ND(0.020)	ND(0.050)
	12/15/2003	55	7.3	ND(0.050)	ND(0.050)	ND(0.050)	0.64	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.020)
	5/2/2004	51	1.5	ND(0.020)	ND(0.020)	ND(0.020)	0.14	ND(0.040)	0.036	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.0010)
	4/27/2005	51	0.068	0.011	ND(0.0010)	ND(0.0010)	0.0052	ND(0.0020)	0.0041	ND(0.0020)	ND(0.0050)	0.018	0.028	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	52	0.018	0.006	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0021	ND(0.0020)	ND(0.0050)	0.053	0.087	ND(0.0010)	ND(0.0020)	0.015	ND(0.0010)
	4/13/2007	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)
	4/23/2008	42	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)
	4/3/2009	49	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/20/2010	42	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
CL06-BR	5/15/2003	60	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	12/29/2003	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/2/2009	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/22/2010	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/4/2011	68	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
CL06-DO	4/4/2012	68	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/15/2003	34	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/29/2003	44	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)
	4/25/2008	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)
	4/2/2009	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/22/2010	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
CL08-BR_ZONE1	4/4/2011	41	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/4/2012	41	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/5/2005	159	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2006	159	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/16/2007	159	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	159	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/7/2009	159	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/28/2010	159	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0028	0.0038	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
4/14/2011	159	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
4/2/2012	159	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)
CLO8-BR_ZONE2	1/5/2005	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2006	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/16/2007	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/7/2009	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/28/2010	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/14/2011	102	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
4/2/2012	102	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
CLO8-BR_ZONE3	1/5/2005	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2006	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/16/2007	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/7/2009	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/28/2010	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
	4/14/2011	70	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
4/2/2012	70	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
CLO8-DO	12/23/2003	76	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0047	ND(0.0010)	ND(0.0020)	0.0022	ND(0.0010)
	1/4/2005	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0020)	0.0014	ND(0.0010)
	1/4/2006	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0010)
	4/15/2007	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0020)	0.0014	ND(0.0010)
	4/25/2008	58	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0020)	0.0019	ND(0.0010)
	4/6/2009	51	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)
	4/22/2010	52	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	0.0011	ND(0.0020)
	4/6/2011	51	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/5/2012	51.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/16/2003	160	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	2.8	5.2	ND(0.10)	ND(0.10)	1.7	ND(0.020)
12/19/2003	160	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.76	1.6	ND(0.020)	0.1	1.3	ND(0.025)	
5/3/2004	160	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	1.0	1.8	ND(0.025)	0.21	1.6	ND(0.020)
1/4/2005	160	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.86	1.1	ND(0.020)	0.17	2.2	ND(0.020)	
5/3/2005	160	ND(0.020)	ND(0.020)	0.022	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.56	1.0	ND(0.020)	0.57	2.6	ND(0.020)	
1/5/2006	160	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.9	2.8	ND(0.020)	0.14	1.2	ND(0.025)	
4/3/2006	160	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.38	0.86	ND(0.025)	0.38	3.2	ND(0.050)
4/12/2007	160	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.69	1.8	ND(0.050)	0.18	4.6	ND(0.10)	
11/15/2007	160	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	0.69	1.2	ND(0.10)	0.33	10	ND(0.025)J
2/6/2008	160	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.050)J	ND(0.025)J	ND(0.050)J	ND(0.13)J	0.59J	0.73J	ND(0.025)J	ND(0.050)J	2.4J	ND(0.020)
4/23/2008	160	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.8	2.6	ND(0.020)	ND(0.040)	0.51	ND(0.050)	
10/23/2008	160	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.66	1.3	ND(0.050)	0.18	5.7	ND(0.025)	
4/6/2009	160	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	1.3	2.2	ND(0.025)	ND(0.025)	0.4	ND(0.010)	
11/2/2009	160	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.58	1.1	ND(0.010)	0.069	1.0	ND(0.050)	
4/21/2010	160	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.7	1.7	ND(0.050)	ND(0.050)	5.7	ND(0.10)	
11/15/2010	160	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.62	1.1	ND(0.10)	0.13	11D	ND(0.020)	
4/14/2011	160	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.97	1.8	ND(0.020)	0.086	1.8	ND(0.020)	
10/24/2011	160	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.83	2.0D	ND(0.020)	ND(0.020)	1.0	ND(0.050)	
4/2/2012			ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.66	1.4	ND(0.040)	0.11	6.4D	ND(0.040)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
CL09-BR_ZONE2	6/3/2002	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.24	0.5	ND(0.10)	0.2	4.4	ND(0.050)	
	5/16/2003	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.34	0.86	ND(0.10)	0.8	6.4	ND(0.025)	
	12/19/2003	119	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.49	0.85	ND(0.025)	0.58	2.4	ND(0.050)	
	5/3/2004	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.36	0.63	ND(0.050)	0.76	3.7	ND(0.010)	
	1/4/2005	119	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	0.011	ND(0.020)	ND(0.050)	0.049	0.063	ND(0.010)	0.099	0.77	ND(0.050)	
	5/3/2005	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.34	0.62	ND(0.050)	0.68	3.6	ND(0.025)	
	1/5/2006	119	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.38	0.86	ND(0.025)	0.4	2.7	ND(0.025)	
	4/3/2006	119	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.34	1.0	ND(0.025)	0.31	2.9	ND(0.020)	
	4/12/2007	119	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.0	2.0	ND(0.020)	0.29	2.6	ND(0.10)	
	11/15/2007	119	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	0.62	1.2	ND(0.10)	0.34	11	ND(0.020)J	
	2/6/2008	119	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.040)J	ND(0.020)J	ND(0.040)J	ND(0.10)J	0.45J	0.76J	ND(0.020)J	0.19J	2.0J	ND(0.050)	
	4/23/2008	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.59	1.2	ND(0.050)	0.28	3.5	ND(0.050)	
	10/23/2008	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.61	1.4	ND(0.050)	0.19	5.8	ND(0.050)	
	4/6/2009	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.81	1.5	ND(0.050)	0.12	5.9	ND(0.025)	
	11/2/2009	119	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	0.43	0.94	ND(0.025)	0.078	2.9	ND(0.050)	
	4/21/2010	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.68	1.3	ND(0.050)	0.084	5.2	ND(0.10)	
	11/15/2010	119	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.42	0.75	ND(0.10)	0.12	7.7	ND(0.10)	
4/14/2011	119	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.42	0.76	ND(0.10)	0.14	9.8	ND(0.050)		
10/24/2011	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.33	1	ND(0.050)	0.067	2.7	ND(0.050)		
4/2/2012			ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.38	0.96	ND(0.050)	0.09	4.5	ND(0.050)		
CL09-BR_ZONE3	6/3/2002	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.09	0.13	ND(0.10)	0.9	7.2	ND(0.010)	
	5/16/2003	81	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.28	0.4	ND(0.020)	2.5D	0.77	ND(0.050)	
	12/19/2003	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	ND(0.050)	ND(0.050)	ND(0.050)	1.2	5.4	ND(0.020)	
	5/3/2004	81	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.079	0.16	ND(0.020)	0.91	2.4	ND(0.020)	
	1/4/2005	81	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.11	0.15	ND(0.020)	1.4	0.26	ND(0.020)	
	5/3/2005	81	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.039	0.076	ND(0.020)	1.6	1.1	ND(0.0050)	
	1/5/2006	81	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.015	0.04	ND(0.0050)	0.65	0.41	ND(0.050)	
	4/3/2006	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.15	0.46	ND(0.050)	0.76	6.2	ND(0.050)	
	4/12/2007	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.46	1.4	ND(0.050)	0.1	3.8	ND(0.10)	
	11/15/2007	81	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	0.67	1.2	ND(0.10)	0.37	10	0.014J	
	2/6/2008	81	ND(0.013)J	ND(0.013)J	ND(0.013)J	ND(0.013)J	ND(0.013)J	ND(0.025)J	ND(0.013)J	ND(0.025)J	ND(0.063)J	0.21J	0.51J	ND(0.013)J	ND(0.025)J	1.4DJ	ND(0.050)	
	4/23/2008	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.53	1.0	ND(0.050)	0.17	4.0	ND(0.10)	
	10/23/2008	81	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	0.53	1.0	ND(0.10)	0.2	7.2	ND(0.050)	
	4/6/2009	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.56	0.84	ND(0.050)	0.11	6.3	ND(0.0050)	
	11/2/2009	81	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.21	0.29	ND(0.0050)	0.75	0.62	ND(0.050)	
	4/21/2010	81	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.24	0.36	ND(0.050)	ND(0.050)	5.9	ND(0.040)	
	11/15/2010	81	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.22	0.33	ND(0.040)	0.75	4.1D	0.016	
4/14/2011	81	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.048	0.036	ND(0.010)	0.063	0.98	0.014		
10/24/2011	81	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.05	0.09	ND(0.010)	1.2D	1.2D	ND(0.0020)		
4/2/2012			ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.12	0.31	ND(0.020)	0.3	2.6D	ND(0.020)		
CL09-DO	6/3/2002	36	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	1/28/2003	36	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/15/2003	36	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/17/2003	36	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.007	0.0079	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/1/2004	33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0037	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	5/2/2005	33	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0072J	0.016J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J
	4/7/2006	31	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0015	0.0044	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
CL09-DO (Cont.)	4/12/2007	36	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0017	0.0057	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/24/2008	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.021	0.029	ND(0.0010)	ND(0.0020)	0.0057	ND(0.0010)	
	4/2/2009	35	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.015	0.037	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0010)	
	4/21/2010	35	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.024	0.061	ND(0.0010)	ND(0.0010)	0.0024	ND(0.0020)	
	4/4/2011	32	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/2/2012	32.8	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.073	0.18	ND(0.0020)	ND(0.0020)	0.0061	ND(0.0020)
CL09-S	6/3/2002	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	0.006	ND(0.0010)	
	5/1/2004	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0013	ND(0.0010)	
	9/24/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
CL10-BR	6/3/2002	47	ND(0.010)	ND(0.010)	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.57	0.93	ND(0.020)	ND(0.020)	2.3	0.04	
	5/14/2003	47	ND(0.0020)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.010)	0.16	0.25	ND(0.0040)	ND(0.0040)	0.50D	ND(0.010)	
	12/16/2003	47	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.051	ND(0.010)	ND(0.020)	0.73	ND(0.0050)	
	4/26/2004	47	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.083	0.13	ND(0.0050)	ND(0.010)	0.5	ND(0.0025)	
	12/30/2004	46	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0064	ND(0.0025)	ND(0.0050)	0.34	ND(0.0010)	
	4/28/2005	46	0.0058	0.0055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/28/2006	44.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/31/2007	47	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/10/2007	47	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	11/13/2007	46	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/21/2008	46	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	10/21/2008	46	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0014	0.0016	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/6/2009	44	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0011	0.0023	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/27/2009	44	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/20/2010	46	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/14/2010	45	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/5/2011	44	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	10/25/2011	46	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0036	ND(0.0020)	ND(0.0020)	0.0027	ND(0.0010)	
	4/5/2012	44.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	CL10-BR2	4/27/2004	98	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0092	ND(0.0010)
4/27/2004		115	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0028	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0084	ND(0.0050)	
CL10-DO	6/3/2002	37	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	3.0	6.5	ND(0.10)	ND(0.10)	0.07	ND(0.10)		
	5/14/2003	37	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	9.2	16	ND(0.20)	ND(0.20)	2.9	ND(0.20)	
	12/16/2003	37	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.8	1.4	ND(0.020)	ND(0.040)	0.03	ND(0.10)	
	4/26/2004	32	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	10	10	ND(0.10)	ND(0.20)	1.4	ND(0.0010)	
	12/30/2004	33	0.0033	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	31	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0026	0.0039	ND(0.0010)	ND(0.0020)	0.098	ND(0.0010)	
	3/28/2006	32.2	0.0059	0.0055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/31/2007	37	0.0034	0.0021	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/10/2007	37	0.004	0.004	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	11/13/2007	36	0.0031	0.0018	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/25/2008	36	0.0054	0.0056	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0022	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	10/21/2008	36	0.0024	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/6/2009	30	0.0026	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/27/2009	30	0.0021	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/20/2010	36	0.0045	0.0041	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/14/2010	31	ND(0.0020)	0.0021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/5/2011	30	ND(0.0020)	0.0027	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	10/27/2011	36	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/6/2012	30.5	ND(0.0020)	0.0034	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
CL10-S	6/25/2002	16	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.65	0.21	ND(0.0020)	ND(0.0020)	0.034	ND(0.0050)	
	5/14/2003	16	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.025)	0.70D	0.49	ND(0.010)	ND(0.010)	0.078	ND(0.0010)	
	12/16/2003	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.086	0.0081	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.010)
	4/26/2004	16	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.2	0.23	ND(0.010)	ND(0.020)	0.065	ND(0.0050)
	12/30/2004	14	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.32	0.041	ND(0.0050)	ND(0.010)	0.017	ND(0.010)
	4/28/2005	15	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.3	0.19	ND(0.010)	ND(0.020)	0.085	ND(0.010)
	3/28/2006	13.9	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.1	0.12	ND(0.010)	ND(0.020)	0.044	ND(0.0010)
	10/19/2006	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.044	0.003	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)
	1/31/2007	16	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.38	0.027	ND(0.0050)	ND(0.010)	0.0095	ND(0.010)
	4/10/2007	16	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.3	0.12	ND(0.010)	ND(0.020)	0.056	ND(0.0010)
	11/13/2007	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.023	0.0019	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.020)J
	4/21/2008	15	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.040)J	ND(0.020)J	ND(0.040)J	ND(0.10)J	2.2J	0.24J	ND(0.020)J	ND(0.040)J	0.095J	ND(0.0010)
	10/21/2008	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.014	0.0066	ND(0.0010)	ND(0.0020)	0.0019	ND(0.020)
	4/6/2009	13	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	1.4	0.12	ND(0.020)	ND(0.020)	0.048	ND(0.0010)
	10/27/2009	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0064	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0050)
	4/21/2010	15	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.64	0.041	ND(0.0050)	ND(0.0050)	0.024	ND(0.0020)
	10/14/2010	13	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.013	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)
	4/5/2011	13	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.87	0.032	ND(0.010)	ND(0.010)	0.017	ND(0.0020)
10/25/2011	15	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.045	0.0027	ND(0.0020)	ND(0.0020)	0.0096	ND(0.0010)	
4/5/2012	13	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.13	0.0035	ND(0.0020)	ND(0.0020)	0.0032	ND(0.0020)	
CL11-DO	4/11/2007	49	0.051	0.086	0.042	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.012	0.095	ND(0.0010)	ND(0.0020)	0.0028	ND(0.0010)	
	4/23/2008	50	0.029	0.053	0.03	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.01	0.079	ND(0.0010)	ND(0.0020)	0.0025	ND(0.0010)	
	4/3/2009	49	0.019	0.034	0.021	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0096	0.07	ND(0.0010)	ND(0.0010)	0.0016	ND(0.0010)	
	4/20/2010	50	0.011	0.024	0.017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0096	0.067	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0020)J	
	4/6/2011	49.5	0.0087J	0.021J	0.019J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.0076J	0.067J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0010)	
4/6/2012	49.5	0.0043	0.0095	0.012	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0059	0.044	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)		
CL11-S	4/11/2007	23	0.014	0.0063	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0056	0.0046	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/23/2008	24	0.016	0.0071	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.013	0.0064	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/3/2009	24	0.011	0.0029	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.011	0.005	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/20/2010	24	0.01	0.0026	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.014	0.0061	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)J	
	4/6/2011	23.4	0.0057J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.0086J	0.0037J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)	
4/6/2012	23.5	0.0077	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.012	0.0063	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)		
CL12-S1	6/3/2002	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	2/26/2003	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/15/2003	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/17/2003	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/1/2004	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0046	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/29/2005	23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0049	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	3/28/2006	22	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0035	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/14/2007	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0037	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/24/2008	23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0013	0.0041	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/2/2009	22	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0031	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
CL13-BR	12/22/2003	80	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	12/22/2003	105	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	12/30/2004	80	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	12/30/2004	101	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)		
CULVERT_OUTFALL	5/15/2003	NA	ND(0.0020)	0.002	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.019	0.096	ND(0.0020)	ND(0.0020)	0.071	ND(0.0010)		
	12/22/2003	NA	ND(0.0010)	0.0019	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.02	0.091	ND(0.0010)	ND(0.0020)	0.063	ND(0.0010)		
	1/4/2005	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0020)	0.0018	ND(0.0010)		
	1/4/2006	NA	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.019	0.082	ND(0.0010)	ND(0.0020)	0.059	ND(0.0010)		
	4/15/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0046	0.024	ND(0.0010)	ND(0.0020)	0.018	ND(0.0010)		
	4/25/2008	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0088	0.04	ND(0.0010)	ND(0.0020)	0.034	ND(0.0010)		
	4/3/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.016	0.077	ND(0.0010)	ND(0.0010)	0.064	ND(0.0010)		
	4/28/2010	NA	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.016	0.075	ND(0.0010)	ND(0.0010)	0.074	ND(0.0020)		
GZ-1	8/26/2002	NA	ND(0.0020)	0.002	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.004	0.024	ND(0.0020)	ND(0.0020)	0.014	ND(0.0020)		
	9/18/2002	NA	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.016	ND(0.0020)	ND(0.0020)	0.01	ND(0.0020)		
	1/28/2003	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.017	ND(0.0020)	ND(0.0020)	0.004	ND(0.0020)		
	5/14/2003	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.019	ND(0.0020)	ND(0.0020)	0.006	ND(0.0010)		
	12/23/2003	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0056	ND(0.0010)	ND(0.0020)	0.0031	ND(0.0010)		
	5/3/2004	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.014	ND(0.0010)	ND(0.0020)	0.0031	ND(0.0010)	
	4/29/2005	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0016	0.013	ND(0.0010)	ND(0.0020)	0.004	ND(0.0010)	
	4/7/2006	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0046	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/13/2007	45	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	0.016	ND(0.0010)	ND(0.0020)	0.008	ND(0.0010)	
	4/25/2008	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0064	ND(0.0010)	ND(0.0020)	0.0029	ND(0.0010)	
	4/3/2009	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	0.016	ND(0.0010)	ND(0.0010)	0.0024	ND(0.0010)	
	4/20/2010	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.002	0.022	ND(0.0010)	ND(0.0010)	0.0062	0.0036	
	4/5/2011	12	0.0031	0.0044	0.0074	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.17	1.6D	ND(0.0020)	0.0029	0.62D	0.003	
	4/5/2012	12.3	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.18	0.76D	ND(0.010)	ND(0.010)	0.35	ND(0.010)	
	GZ-2R	8/26/2002	NA	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.036	0.30D	ND(0.0020)	ND(0.0020)	0.27	0.003	
9/18/2002		NA	ND(0.0020)	0.002	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.04	0.18	ND(0.0020)	ND(0.0020)	0.29	ND(0.0020)		
1/29/2003		14	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.006	0.04	ND(0.0020)	ND(0.0020)	0.037	ND(0.0020)		
5/14/2003		15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.015	0.091	ND(0.0020)	ND(0.0020)	0.044	0.0014		
12/22/2003		15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.026	0.12	ND(0.0010)	ND(0.0020)	0.057	ND(0.0010)	
5/3/2004		14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.026	0.1	ND(0.0010)	ND(0.0020)	0.037	ND(0.0010)	
4/29/2005		11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0071	0.08	ND(0.0010)	ND(0.0020)	0.044	ND(0.0050)	
4/7/2006		11	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.015	0.37	ND(0.0050)	ND(0.010)	0.29	ND(0.0010)	
4/13/2007		15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0042	0.1	ND(0.0010)	ND(0.0020)	0.07	ND(0.0020)	
4/25/2008		14	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.012	0.26	ND(0.0020)	ND(0.0040)	0.17	ND(0.0025)	
4/3/2009		10	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0083	0.23	ND(0.0025)	ND(0.0025)	0.17	ND(0.0020)	
8/26/2002		NA	0.002	0.006	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.010)	0.075	0.30D	ND(0.0020)	0.008	0.13	ND(0.0010)	
GZ-4	5/3/2004	15	0.0012	0.0022	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.016	0.08	ND(0.0010)	0.0035	0.052	ND(0.0010)		
	10/19/2006	NA	0.0037	0.0054	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.016	0.094	ND(0.0010)	0.0038	0.087	ND(0.0010)		
	4/13/2007	15	0.0021	0.0031	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0086	0.065	ND(0.0010)	ND(0.0020)	0.056	ND(0.0010)	
	10/20/2008	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0013	0.019	ND(0.0010)	ND(0.0020)	0.012	ND(0.0010)		
	10/26/2009	14	ND(0.0010)	0.003	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0039	0.029	ND(0.0010)	0.0016	0.045	ND(0.0010)		
	4/20/2010	14	ND(0.0010)	0.0015	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0028	0.044	ND(0.0010)	0.0037	0.069	0.0028		
	10/14/2010	14	ND(0.0020)	0.0046	0.0045	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.047	0.24D	ND(0.0020)	0.0028	0.43D	ND(0.0050)		
	4/5/2011	14	ND(0.0050)	0.0056	0.0072	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.097	0.78D	ND(0.0050)	0.006	0.55D	0.0021	
	10/25/2011	14	ND(0.0020)	0.0027	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0037	0.003	ND(0.0020)	0.11	0.36D	ND(0.0010)	
	4/5/2012	14	ND(0.010)	ND(0.010)	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.14	0.84	ND(0.010)	ND(0.010)	0.6	ND(0.010)	
	MW-001	1/31/2007	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
		4/11/2007	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
11/13/2007		17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	





**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
MW-005R	5/2/2004	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.0071	ND(0.0010)	ND(0.0020)	0.0018	ND(0.0010)	
	2/1/2007	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.004	0.011	ND(0.0010)	ND(0.0020)	0.011	ND(0.0010)	
	4/11/2007	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0036	0.011	ND(0.0010)	ND(0.0020)	0.0073	ND(0.0010)	
	11/13/2007	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.023	0.042	ND(0.0010)	ND(0.0020)	0.02	ND(0.0010)	
	4/22/2008	21	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0055	0.017	ND(0.0010)	ND(0.0020)	0.0063	ND(0.0010)	
	10/20/2008	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0093	0.026	ND(0.0010)	ND(0.0020)	0.011	ND(0.0010)	
	4/1/2009	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0033	0.0086	ND(0.0010)	ND(0.0010)	0.0023	ND(0.0010)
	10/26/2009	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.008	0.019	ND(0.0010)	ND(0.0010)	0.011	ND(0.0010)
	4/21/2010	21	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0042	0.011	ND(0.0010)	ND(0.0010)	0.0037	ND(0.0020)
	4/4/2011	16	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.006	0.02	ND(0.0020)	ND(0.0020)	0.0071	ND(0.0010)
	4/2/2012	17.25	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0021	0.0054	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	MW-006R	5/2/2004	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)
MW-007R	6/3/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.006	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	1/23/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/14/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/17/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	5/2/2004	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/29/2005	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	3/31/2006	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/11/2007	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/24/2008	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/2/2009	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/28/2010	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	MW-008	6/3/2002	20	0.11	0.01	0.02	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.42	1.2	ND(0.020)	0.2	2.0	ND(0.020)
1/29/2003		20	2.8	0.04	0.08	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.10)	ND(0.040)	0.98	0.72	ND(0.040)	0.14	2.7	ND(0.020)	
5/12/2003		20	1.9	0.03	0.05	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.10)	ND(0.040)	1.1	3.3	ND(0.040)	0.06	4.3	ND(0.020)	
12/17/2003		20	0.092	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	0.31	2.2	0.039	
4/23/2004		17	2.5	0.082	0.046	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.4	1.2	ND(0.020)	0.13	2.4	ND(0.050)	
4/27/2005		18	6.1	0.089	0.051	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.098	0.26	ND(0.050)	ND(0.10)	0.92	ND(0.020)	
3/27/2006		17.1	1.7	0.055	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.039	0.086	ND(0.020)	0.076	1.1	ND(0.020)	
4/23/2008		19	2.8	0.18	0.096	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	0.05	ND(0.020)	0.18	0.24	ND(0.050)	
4/3/2009		17	1.3	1.3	0.066	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.18	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	5.1	1.5	ND(0.025)	
4/20/2010		19	3.0	0.38	0.15	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	0.07	0.087	ND(0.025)	2.1	2.5	ND(0.020)	
4/6/2011		16.9	0.92J	0.21J	0.055J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	0.023J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	1.3J	0.5J	ND(0.010)	
4/4/2012		17	0.1	0.9	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.64	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	
8/21/2012	16.8	0.034	0.24	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.41	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)		
MW-009	6/13/2002	20	ND(0.010)	ND(0.010)	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	5.8D	2.2	ND(0.020)	0.03	0.62	ND(0.010)	
	1/23/2003	20	0.02	0.01	0.03	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	3.8D	13D	ND(0.020)	0.06	1.3	ND(0.010)	
	5/12/2003	20	0.04	0.03	0.05	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	10D	29D	ND(0.020)	0.1	2.3	ND(0.050)	
	12/15/2003	20	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	1.8	6	ND(0.050)	ND(0.10)	1.9	ND(0.25)	
	4/23/2004	18	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.50)	ND(1.3)	9.2	22N	ND(0.25)	ND(0.50)	1.9	ND(0.25)	
	4/27/2005	20	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.50)	ND(1.3)	18	29	ND(0.25)	ND(0.50)	1.9	ND(0.20)	
	3/27/2006	20.3	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	14	19	ND(0.20)	ND(0.40)	1.7	0.1	
	1/30/2007	20	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	0.16	0.76	ND(0.10)	ND(0.20)	9.6	0.27	
	4/10/2007	20	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.50)	ND(1.3)	ND(0.25)	ND(0.25)	ND(0.25)	1.3	26	0.019	
	7/19/2007	21.2	0.03	0.01	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	0.0016	0.0016	0.016	0.021	0.0024
11/12/2007	20	0.0035	0.0018	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.017	ND(0.0020)	ND(0.0050)	0.0028	0.0078	ND(0.0010)	0.057	0.11	0.0087	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohier Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
MW-009 (Cont.)	1/23/2008	20	0.001	0.0051	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.01	0.011	0.0061J	
	4/21/2008	20	0.0068J	0.011J	ND(0.0010J)	ND(0.0010J)	ND(0.0010J)	ND(0.0020J)	ND(0.0010J)	ND(0.0020J)	ND(0.0050J)	ND(0.0010J)	ND(0.0010J)	ND(0.0010J)	0.0077J	0.014J	0.0023J	
	7/28/2008	19	ND(0.0010J)	0.070J	ND(0.0010J)	ND(0.0010J)	ND(0.0010J)	ND(0.0020J)	ND(0.0010J)	ND(0.0020J)	ND(0.0050J)	ND(0.0010J)	ND(0.0010J)	0.0026J	0.0087J	0.0091J	ND(0.0010)	
	10/21/2008	20	0.0018	0.041	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0092	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0016	0.022	0.0072	ND(0.0010)	
	1/14/2009	19	ND(0.0010)	0.0025	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.014	ND(0.0010)	ND(0.0010)	0.0015	ND(0.0010)	0.007	0.0061	ND(0.0010)	
	4/2/2009	20	ND(0.0010)	0.003	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0099	ND(0.0010)	ND(0.0010)	0.0015	ND(0.0010)	0.0036	0.0053	0.0018	
	7/14/2009	19	0.0018	0.011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0065	0.047	0.0018	0.026	0.043	0.0014	
	10/27/2009	20	ND(0.0010)	0.0028	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0056	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.005	0.0059	ND(0.0010)	
	1/28/2010	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0023	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0035	0.0058	ND(0.0010)	
	4/22/2010	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0044	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.0086	0.0036	ND(0.0010J)	
	7/14/2010	19	ND(0.0010J)	ND(0.0010J)	ND(0.0010J)	ND(0.0010J)	ND(0.0010J)	ND(0.0010J)	ND(0.0010J)	0.0025J	ND(0.0010J)	ND(0.0010J)	ND(0.0010J)	ND(0.0010J)	0.0026J	0.0039J	ND(0.0020)	
	10/12/2010	20	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	0.0024	ND(0.0020)	
	1/4/2011	19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0023	ND(0.0020)	0.013	0.011	ND(0.0020)	
	4/5/2011	19.8	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.003	0.0028	ND(0.0020)	
	7/28/2011	19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0056	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.03	0.023	ND(0.0020)	
	10/25/2011	20	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0096	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.016	0.02	ND(0.0020)	
	1/17/2012	20	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.006	ND(0.0020)	ND(0.0020)	0.0034	ND(0.0020)	0.0093	0.039	ND(0.0020)	
	4/3/2012	20	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0029	ND(0.0020)	ND(0.0020)	0.0061	ND(0.0020)	0.012	0.027	ND(0.0020)	
	8/21/2012	19.7	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0027	ND(0.0020)	0.0058	0.016	ND(0.0020)	
	MW-009A	6/13/2002	10	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.2	0.067	ND(0.0020)	0.011	0.13	0.01
1/23/2003		10	0.026	0.008	0.032	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.003	ND(0.010)	ND(0.010)	1.0D	1.6D	ND(0.0020)	0.093	2.6D	0.006	
5/12/2003		10	0.004	ND(0.0020)	0.014	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.3	0.41D	ND(0.0020)	0.070D	0.90D	ND(0.0010)	
12/15/2003		10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0024	0.003	ND(0.0010)	ND(0.0020)	0.003	ND(0.0025)	
4/23/2004		9	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.15	0.28	ND(0.0025)	ND(0.0050)	0.14	ND(0.0010)	
4/27/2005		13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.016	0.014	ND(0.0010)	ND(0.0020)	0.01	ND(0.0010)	
3/27/2006		13.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.062	0.084	ND(0.0010)	ND(0.0020)	0.1	ND(0.0010)	
4/10/2007		10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0018	0.0021	ND(0.0010)	ND(0.0020)	0.0021	ND(0.0010J)	
4/21/2008		13	0.034J	0.0011J	0.0022J	ND(0.0010J)	ND(0.0010J)	ND(0.0020J)	ND(0.0010J)	ND(0.0020J)	ND(0.0050J)	0.094J	0.11J	ND(0.0010J)	ND(0.0020J)	0.020J	ND(0.0010)	
10/22/2008		13	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.011	0.015	ND(0.0010)	0.0046	0.014	ND(0.0010)	
4/3/2009		13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
10/26/2009		13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
4/20/2010		9	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.01	0.0084	ND(0.0010)	ND(0.0010)	0.016	ND(0.0020)	
10/12/2010		9	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
4/4/2011		13.4	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0041	0.0049	ND(0.0020)	0.0033	0.062	ND(0.0020)	
10/26/2011		13	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0049	0.012	ND(0.0020)	0.097	0.13	ND(0.0020)	
4/3/2012	13	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0033	ND(0.0020)		
MW-010	5/13/2003	40	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/13/2003	50	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/23/2003	40	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	12/23/2003	50	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.10)	
MW-013	6/3/2002	20	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	3.7	9.0	ND(0.20)	ND(0.20)	0.3	ND(0.010)	
	6/3/2002	35	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	1.8	1.1	ND(0.020)	ND(0.020)	0.18	ND(0.020)	
	6/3/2002	55	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.10)	ND(0.040)	3.7	3.4	ND(0.040)	ND(0.040)	0.6	ND(0.020)	
	1/27/2003	55	1.8	0.02	ND(0.020)	ND(0.020)	4.7	0.02	3.5	ND(0.10)	0.14	0.42	ND(0.020)	ND(0.040)	ND(0.040)	ND(0.020)	ND(0.010)	
	5/13/2003	55	0.71	0.02	ND(0.010)	ND(0.010)	2.2	0.01	1.6	ND(0.050)	0.05	0.07	ND(0.010)	ND(0.020)	ND(0.020)	ND(0.010)	ND(0.010)	
	12/16/2003	55	0.44	ND(0.010)	ND(0.010)	ND(0.010)	0.76	ND(0.020)	0.7	ND(0.020)	ND(0.050)	1.2	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0050)	
	5/1/2004	40	0.26	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.47	ND(0.010)	0.26	ND(0.010)	ND(0.025)	0.022	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohier Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)
MW-013 (Cont.)	4/28/2005	55	0.03	0.0014	ND(0.0010)	ND(0.0010)	0.043	ND(0.0020)	0.042	ND(0.0020)	ND(0.0050)	0.072	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0025)
	3/31/2006	39	0.025	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.047	ND(0.0050)	0.025	ND(0.0050)	ND(0.013)	0.26	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.025)
	4/10/2007	55	0.026	ND(0.025)	ND(0.025)	ND(0.025)	0.033	ND(0.050)	0.036	ND(0.050)	ND(0.13)	2.7	2.2	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.10)
	11/13/2007	39	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	9.9	5.9	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.020)
	4/22/2008	54	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	0.026	ND(0.040)	ND(0.10)	2.3	1.4	ND(0.020)	ND(0.040)	0.12	ND(0.20)
	4/3/2009	42	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	21	12	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.020)
	4/21/2010	54	1.2	ND(0.020)	ND(0.020)	ND(0.020)	2.2	ND(0.020)	0.24	ND(0.020)	ND(0.020)	0.074	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.0020)
	10/14/2010	54	0.77D	0.0072	ND(0.0020)	ND(0.0020)	2.7D	0.014	0.30D	ND(0.0020)	0.0061	0.0037	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/14/2011	44	0.25D	0.0041	ND(0.0020)	ND(0.0020)	0.73D	0.0076	0.17	ND(0.0020)	0.0022	0.062	0.0075	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0050)
	10/27/2011	41	0.25	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.42	0.0053	0.24	ND(0.0050)	ND(0.0050)	0.0066	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
	4/5/2012	53	0.27	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.38	0.0051	0.31	ND(0.0050)	ND(0.0050)	0.011	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)
	MW-014A	6/3/2002	61	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.004	0.47D	ND(0.0020)	ND(0.0020)	0.01
1/23/2003		61	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.067	ND(0.0020)	ND(0.0020)	0.012	0.002
5/13/2003		61	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.011	ND(0.0020)	ND(0.0020)	0.70D	ND(0.0050)
12/17/2003		61	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.023	ND(0.0050)	ND(0.010)	0.46	ND(0.0025)
5/1/2004		60	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.2	ND(0.0025)	ND(0.0050)	0.15	ND(0.0010)
4/28/2005		60	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0034	0.1	ND(0.0010)	ND(0.0020)	0.12	ND(0.0010)
3/31/2006		59	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0039	0.066	ND(0.0010)	ND(0.0020)	0.028	ND(0.0020)
4/11/2007		61	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.005	0.24	ND(0.0020)	ND(0.0040)	0.04	ND(0.0050)
4/22/2008		60	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.009	0.49	ND(0.0050)	ND(0.010)	0.057	ND(0.0050)
4/3/2009		60	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.42	ND(0.0050)	ND(0.0050)	0.054	ND(0.0010)
4/20/2010		60	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.007	0.44	ND(0.0050)	ND(0.0050)	0.054	ND(0.0020)
4/4/2011		59	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.005	0.38D	ND(0.0020)	ND(0.0020)	0.065	ND(0.0010)
4/5/2012	59	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0027	0.16D	ND(0.0020)	0.0023	0.06	ND(0.0020)	
MW-030	5/2/2004	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/4/2005	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2005	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	12/29/2005	21	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/7/2006	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	2/1/2007	21	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/14/2007	21	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/16/2007	19	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/22/2008	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)
	4/9/2009	20	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
	MW-032	6/25/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.005	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
5/14/2003		30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
12/15/2003		30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.019	0.0025	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
4/26/2004		23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.015	0.0014	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
4/28/2005		24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.015	0.0014	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
3/31/2006		24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.013	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)
MW-033B	4/11/2007	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.005	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)
	6/13/2002	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	5/14/2003	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/17/2003	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/27/2004	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
4/28/2005	26	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohier Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
MW-033B (Cont.)	3/31/2006	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/11/2007	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/23/2008	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/9/2009	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.019	
	4/21/2010	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
	4/5/2011	24.8	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	4/6/2012	24.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
MW-034	1/14/2005	NA	ND(0.010)	0.014	0.017	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	0.092	1.2	ND(0.010)	
	1/4/2006	65	ND(0.010)	0.011	0.016	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.012	0.27	ND(0.010)	ND(0.020)	1.1	ND(0.010)	
	4/20/2007	65	ND(0.010)	0.01	0.017	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.01	0.19	ND(0.010)	ND(0.020)	1.1	ND(0.010)	
	4/24/2008	64	ND(0.010)	0.013	0.02	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.015	0.22	ND(0.010)	0.024	1	ND(0.010)	
	4/9/2009	NA	ND(0.010)	ND(0.010)	0.014	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.013	0.21	ND(0.010)	0.013	1.1	ND(0.0010)	
	4/28/2010	64	ND(0.010)	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.11	ND(0.010)	0.014	1.1	ND(0.020)J	
	4/7/2011	64	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	0.14J	ND(0.020)J	0.02J	1.2J	ND(0.0010)	
4/4/2012	63	ND(0.020)	ND(0.020)	0.021	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.16	ND(0.020)	0.022	1.3	ND(0.020)		
MW-035	12/22/2003	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/4/2005	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/4/2006	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/15/2007	57.6	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/24/2008	56.6	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	
MW-036	4/1/2009	24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	6/3/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	6/3/2002	56	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	1/24/2003	56	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.007	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	5/15/2003	56	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.005	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/17/2003	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)	0.001	0.0051	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/1/2004	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0014	0.0063	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/29/2005	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0013	0.0048	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	3/28/2006	53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	0.0036	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/14/2007	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	0.0053	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/22/2008	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0042	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/2/2009	51	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0039	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/20/2010	55	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.25	0.59	ND(0.0050)	ND(0.0050)	0.22	ND(0.010)	
	4/4/2011	51	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.54	1.2D	ND(0.010)	0.017	0.42	ND(0.0020)	
	4/6/2012	51.8	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.75	1.8	ND(0.020)	0.061	0.8	ND(0.020)	
	MW-104R	6/3/2002	10	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
		6/3/2002	27	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.01	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-04-BR	6/3/2002	80	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	6/3/2002	95	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	1/24/2003	95	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	5/14/2003	95	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/16/2003	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/27/2004	79	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/29/2005	78	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/28/2006	79	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/12/2007	90	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/22/2008	89	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)		
OB-04-BR (Cont.)	4/1/2009	89	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	
	4/20/2010	89	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
	4/4/2011	77	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/3/2012	88	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-04-DO	6/3/2002	55	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.005	0.016	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	6/3/2002	70	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)L	
	1/24/2003	70	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.007	ND(0.0020)	ND(0.0020)	0.016	ND(0.0020)L	ND(0.0020)L	
	5/14/2003	55	ND(0.0020)L	ND(0.0020)L	ND(0.0010)L	ND(0.0020)L	ND(0.0020)L	ND(0.0020)L	ND(0.0020)L	ND(0.010)L	ND(0.010)L	ND(0.0020)L	0.0070L	ND(0.0020)L	ND(0.0020)L	0.0040L	ND(0.0010)	ND(0.0010)	
	5/14/2003	70	ND(0.0020)L	ND(0.0020)L	ND(0.0010)L	ND(0.0020)L	ND(0.0020)L	ND(0.0020)L	ND(0.0020)L	ND(0.010)L	ND(0.010)L	0.0040L	0.0090L	ND(0.0020)L	ND(0.0020)L	0.031L	ND(0.0010)	ND(0.0010)	
	12/16/2003	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	0.0023	0.0074	ND(0.0010)	ND(0.0010)	0.012	ND(0.0010)	
	12/16/2003	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	0.0043	0.011	ND(0.0010)	ND(0.0020)	0.016	ND(0.0010)	
	4/27/2004	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.016	0.033	ND(0.0010)	ND(0.0020)	0.0086	ND(0.0010)	
	4/29/2005	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.025	0.05	ND(0.0010)	ND(0.0020)	0.007	ND(0.0010)	
	3/28/2006	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.024	0.057	ND(0.0010)	ND(0.0020)	0.0074	ND(0.0010)	
	4/12/2007	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.032	0.062	ND(0.0010)	ND(0.0020)	0.014	ND(0.0010)	
	4/22/2008	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0014	0.0044	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/1/2009	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.035	0.07	ND(0.0010)	ND(0.0010)	0.038	ND(0.0020)	
	4/20/2010	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.054	0.1	ND(0.0010)	ND(0.0010)	0.027	ND(0.0020)	
	4/4/2011	67	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.04	0.094	ND(0.0020)	ND(0.0020)	0.043	ND(0.0020)	
	4/3/2012	67	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.059	0.14	ND(0.0020)	0.011	0.091	ND(0.0020)	
	OB-04-S	6/3/2002	25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
1/24/2003		25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
5/14/2003		25	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
12/16/2003		25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.006	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/27/2004		24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0042	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/29/2005		24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
3/28/2006		23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/22/2008		24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/1/2009		23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
9/24/2009		NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.10)	
4/20/2010		24	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
4/4/2011		23	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.10)	
4/3/2012		23.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
OB-05-BR		6/3/2002	95	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	0.3	3.3	ND(0.20)	ND(0.20)	9.0	ND(0.050)	
	6/3/2002	110	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	0.3	3.2	ND(0.20)	ND(0.20)	9.1	ND(0.020)		
	1/24/2003	110	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.08	0.14	ND(0.10)	ND(0.10)	5.2	ND(0.025)		
	5/14/2003	110	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.10)	ND(0.040)	ND(0.020)	0.05	ND(0.040)	ND(0.040)	4.3	ND(0.020)			
	12/16/2003	110	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.025)	ND(0.025)	0.11	2.5	ND(0.0050)		
	4/27/2004	105	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.029	0.19	ND(0.020)	0.23	2.4	ND(0.010)	
	12/30/2004	95	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	0.49	0.48	ND(0.010)		
	4/29/2005	105	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	1.3	0.049	ND(0.0050)	
	1/4/2006	110	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	0.77	0.079	ND(0.020)	
	3/29/2006	107	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.43	0.059	ND(0.0050)	
	2/1/2007	105	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	1.3	1.0	ND(0.0050)	
	4/12/2007	110	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.72	0.39	ND(0.0010)	
	11/14/2007	100	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.43	0.12	ND(0.0010)	
	4/22/2008	109	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.12	0.064	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-05-BR (Cont.)	4/1/2009	106	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.084	0.036	ND(0.010)
	10/26/2009	104	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.067	0.026	ND(0.0050)
	4/20/2010	109	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.24	1.2	ND(0.010)
	10/12/2010	109	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.41	0.48	ND(0.0040)
	4/4/2011	104	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.004	ND(0.0040)	0.22	0.032	ND(0.0020)
	10/24/2011	109	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0042	ND(0.0020)	0.086	0.013	ND(0.010)
	4/3/2012	104	ND(0.0020)	0.0022	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.11	0.0069	ND(0.0020)
OB-05-DO	6/3/2002	75	ND(0.010)	0.01	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.13	1.9	ND(0.020)	ND(0.020)	0.88	ND(0.0050)	
	6/3/2002	86	ND(0.010)	0.01	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.29	2.1	ND(0.020)	ND(0.020)	0.64	ND(0.0020)	
	1/24/2003	86	ND(0.0050)	ND(0.0050)	0.006	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	0.052	0.44	ND(0.010)	ND(0.010)	0.83	ND(0.0025)	
	5/14/2003	86	ND(0.0020)	0.007	0.007	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.043	0.51	ND(0.0040)	ND(0.0040)	0.29	ND(0.0025)	
	12/16/2003	86	ND(0.0025)	0.0046	0.0039	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.047	0.27	ND(0.0025)	ND(0.0050)	0.13	ND(0.0025)	
	4/27/2004	83	ND(0.0025)	0.0047	0.004	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.089	0.33	ND(0.0025)	ND(0.0050)	0.12	ND(0.0050)	
	12/30/2004	70	ND(0.0025)	0.0048	0.0045	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.074	0.35	ND(0.0025)	ND(0.0050)	0.094	ND(0.0025)	
	4/29/2005	85	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.11	0.44	ND(0.0050)	ND(0.010)	0.096	ND(0.0025)	
	1/4/2006	86	ND(0.0025)	0.0032	0.0029	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.083	0.29	ND(0.0025)	ND(0.0050)	0.073	ND(0.0050)	
	3/29/2006	83	ND(0.0025)	0.0042	0.0031	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.08	0.32	ND(0.0025)	ND(0.0050)	0.077	ND(0.0050)	
	2/1/2007	82	ND(0.0050)	0.01	0.011	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.1	0.41	ND(0.0050)	ND(0.010)	0.098	ND(0.0025)	
	4/12/2007	86	ND(0.0050)	0.012	0.014	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.12	0.43	ND(0.0050)	ND(0.010)	0.098	ND(0.0050)	
	11/14/2007	82	ND(0.0025)	0.008	0.0087	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.074	0.28	ND(0.0025)	ND(0.0050)	0.086	ND(0.0050)	
	4/22/2008	85	ND(0.0050)	0.014	0.016	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.12	0.44	ND(0.0050)	ND(0.010)	0.13	ND(0.0050)	
	4/1/2009	81	ND(0.0050)	0.014	0.014	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.13	0.47	ND(0.0050)	ND(0.0050)	0.11	ND(0.010)	
	10/26/2009	81	ND(0.0050)	0.011	0.0096	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.16	0.69	ND(0.0050)	ND(0.0050)	0.23	ND(0.040)	
	4/20/2010	85	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.52	1.4	ND(0.010)	ND(0.010)	0.4	ND(0.0020)	
	10/12/2010	81.5	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.47	1.9	ND(0.040)	ND(0.040)	0.48	ND(0.020)	
	4/4/2011	81	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.87	3.0D	ND(0.020)	ND(0.020)J	0.76	ND(0.010)	
	10/24/2011	81	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.99	2.7D	ND(0.010)	0.026	1.0D	ND(0.0020)	
4/3/2012	81.3	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.6	1.8	ND(0.020)	ND(0.020)	0.44	ND(0.020)		
OB-05-S	6/3/2002	30	ND(0.0020)	0.004	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.005	0.031	ND(0.0020)	ND(0.0020)	0.007	ND(0.0020)	
	9/18/2002	NA	ND(0.0020)	0.005	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.011	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	2/20/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.005	0.023	ND(0.0020)	ND(0.0020)	0.004	ND(0.0010)	
	5/14/2003	30	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.01	0.056	ND(0.0020)	ND(0.0020)	0.01	ND(0.0010)	
	12/16/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	0.0016	0.0056	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/27/2004	27	ND(0.0010)	0.002	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	0.011	0.043	ND(0.0010)	ND(0.0020)	0.0063	ND(0.0010)	
	4/29/2005	26	ND(0.0010)	0.0037	0.0033	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	0.018	0.073	ND(0.0010)	ND(0.0020)	0.011	ND(0.0020)	
	3/29/2006	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	0.006	0.025	ND(0.0010)	ND(0.0020)	0.0033	ND(0.0010)	
	4/11/2007	15	ND(0.0020)	0.0024	0.003	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.07	0.26	ND(0.0020)	ND(0.0040)	0.088	ND(0.0010)	
	4/12/2007	30	ND(0.0010)	0.0012	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0023	ND(0.0020)	ND(0.0050)	0.0053	0.02	ND(0.0010)	ND(0.0020)	0.0033	ND(0.0010)	
	4/22/2008	29	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0068	ND(0.0020)	ND(0.0050)	0.015	0.051	ND(0.0010)	ND(0.0020)	0.011	ND(0.0010)	
	10/20/2008	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0011	0.0028	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/1/2009	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.002	0.0068	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/26/2009	25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/20/2010	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0043	0.014	ND(0.0010)	ND(0.0010)	0.0028	ND(0.010)	
	10/12/2010	25	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0043	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/4/2011	25	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0022	0.0036	ND(0.0020)	ND(0.0020)J	ND(0.0020)	ND(0.0020)	
	10/24/2011	27	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0034	0.0053	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	
	4/3/2012	25	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0024	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-06-BR	6/3/2002	95	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	1.4	1.8	ND(0.020)	ND(0.020)	0.1	ND(0.010)	
	6/3/2002	102	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	1.2	1.2	ND(0.020)	ND(0.020)	0.07	ND(0.010)	
	1/29/2003	102	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.79	1.7	ND(0.020)	ND(0.020)	0.23	ND(0.010)	
	5/15/2003	102	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.88	1.9	ND(0.020)	ND(0.020)	0.49	ND(0.010)	
	12/17/2003	102	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.76	1.1	ND(0.010)	ND(0.020)	0.35	ND(0.010)	
	5/1/2004	100	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.050)	0.73	1.1	ND(0.010)	ND(0.020)	0.34	ND(0.010)J	
	12/30/2004	100	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.6	0.96	ND(0.010)	ND(0.020)	0.14	ND(0.010)	
	5/2/2005	101	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	ND(0.020)J	ND(0.050)J	0.60J	1.0J	ND(0.010)J	ND(0.020)J	0.12J	ND(0.0050)	
	1/4/2006	102	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.73	0.93	ND(0.010)	ND(0.020)	0.11	ND(0.010)
	4/7/2006	102	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.23	0.49	ND(0.0050)	ND(0.010)	0.097	ND(0.010)
	2/1/2007	102	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.02	0.0062
	4/13/2007	102	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.44	1.2	ND(0.010)	ND(0.020)	0.48	ND(0.0010)
	11/14/2007	100	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.46	ND(0.0050)	ND(0.010)	0.16	ND(0.0050)
	4/23/2008	99	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0038	ND(0.0025)
	4/2/2009	99	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.22	0.46	ND(0.0050)	ND(0.0050)	0.15	ND(0.0025)
	10/26/2009	99	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.12	0.22	ND(0.0025)	ND(0.0025)	0.07	ND(0.0020)
	4/22/2010	101	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.12	0.22	ND(0.0025)	ND(0.0025)	0.04	ND(0.0020)
	10/12/2010	101	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.061	0.19	ND(0.0020)	ND(0.0020)	0.023	ND(0.0020)
	4/5/2011	99	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0028	0.0025	ND(0.0020)	0.029	0.074	ND(0.0020)
	10/24/2011	101	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.07	0.14	ND(0.0020)	ND(0.0020)	0.019	ND(0.010)
4/3/2012	89	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.049	0.14	ND(0.0020)	ND(0.0020)	0.023	ND(0.0020)	
OB-06-DO	6/3/2002	65	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.023	ND(0.010)	ND(0.010)	0.036	0.15	ND(0.0020)	ND(0.0020)	0.012	ND(0.0020)	
	6/3/2002	76	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.01	ND(0.050)	ND(0.020)	0.02	0.69	ND(0.020)	ND(0.020)	0.03	ND(0.0020)	
	1/29/2003	76	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.019	ND(0.0050)	
	5/15/2003	76	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.07	ND(0.0010)	
	12/17/2003	76	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.011	0.01	ND(0.0050)	ND(0.010)	0.44	ND(0.0010)
	5/1/2004	66	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0020)	0.021	ND(0.0025)J
	12/30/2004	74	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0043	0.014	ND(0.0010)	0.0023	0.051	ND(0.0010)
	5/2/2005	66	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0050)J	ND(0.0025)J	ND(0.0050)J	ND(0.013)J	0.026J	0.063J	ND(0.0025)J	0.0073J	0.28J	ND(0.0050)
	1/4/2006	76	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0034	ND(0.0010)	ND(0.0020)	0.055	ND(0.0010)
	4/7/2006	65	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.013	0.079	ND(0.0050)	0.014	0.62	ND(0.0010)
	2/1/2007	76	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	0.0022	0.034	ND(0.010)
	4/13/2007	76	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0037	ND(0.0010)	0.005	0.066	ND(0.0010)
	11/14/2007	65	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.012	ND(0.010)	0.045	1.1	ND(0.0010)
	4/23/2008	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.024	0.041	ND(0.0010)
	10/20/2008	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0021	0.0037	ND(0.0010)	0.041	0.14	ND(0.020)
	4/2/2009	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0039	0.015	ND(0.0010)	0.0099	0.076	ND(0.010)
	10/26/2009	65	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.044	0.1	ND(0.020)	0.031	1.5	ND(0.020)
	4/22/2010	75	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.18	0.35	ND(0.010)	0.013	0.97	ND(0.0020)
	10/12/2010	65.5	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.045	0.096	ND(0.020)	0.075	1.8	0.0044
	4/5/2011	65	ND(0.0020)	ND(0.0020)	0.0034	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.11D	0.31D	ND(0.0020)	0.027	1.2D	ND(0.010)
10/24/2011	75	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.25	0.49	ND(0.010)	0.014	0.77	ND(0.0050)	
4/3/2012	65.6	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.013	0.033	ND(0.010)	0.15	0.59	ND(0.010)	
OB-07-DO	8/26/2002	NA	0.002	0.012	0.013	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.14	0.40D	ND(0.0020)	ND(0.0020)	0.13	ND(0.0050)	
	5/14/2003	40	ND(0.0050)	0.009	0.012	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	0.2	0.77	ND(0.010)	ND(0.010)	0.16	ND(0.0050)	
	12/19/2003	40	ND(0.0050)	0.0054	0.0063	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.16	0.43	ND(0.0050)	ND(0.010)	0.1	ND(0.0050)	
	5/3/2004	38	ND(0.0050)	0.0074	0.0089	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.22	0.61	ND(0.0050)	ND(0.010)	0.15	ND(0.0050)	



**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)
OB-07-DO (Cont.)	12/30/2004	38	ND(0.0050)	0.0077	0.0093	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.16	0.5	ND(0.0050)	ND(0.010)	0.13	ND(0.0050)
	4/29/2005	38	ND(0.0050)	0.0087	0.0093	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.53	ND(0.0050)	ND(0.010)	0.15	ND(0.0050)
	3/29/2006	37	ND(0.0050)	0.0063	0.0057	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.14	0.45	ND(0.0050)	ND(0.010)	0.16	ND(0.0050)
	2/1/2007	40	ND(0.0050)	0.0093	0.0088	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.13	0.48	ND(0.0050)	ND(0.010)	0.18	ND(0.0050)
	4/11/2007	40	ND(0.0050)	0.01	0.012	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.17	0.54	ND(0.0050)	ND(0.010)	0.17	ND(0.0050)
	11/13/2007	36	0.0052	0.011	0.013	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.18	0.61	ND(0.0050)	ND(0.010)	0.21	ND(0.0050)
	4/22/2008	39	ND(0.0050)	0.0095	0.013	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.17	0.54	ND(0.0050)	ND(0.010)	0.2	0.004
	4/2/2009	36	ND(0.0050)	0.0075	0.0092	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.16	0.54	ND(0.0050)	ND(0.0050)	0.2
OB-08-DO	8/26/2002	NA	ND(0.0020)	0.038	0.036	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.50D	2.1D	ND(0.0020)	0.018	0.60D	ND(0.025)
	5/15/2003	80	ND(0.010)	0.05	0.08	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	0.44	3.1	ND(0.020)	0.03	0.96	ND(0.020)
	12/18/2003	80	ND(0.025)	ND(0.025)	0.029	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.41	2.1	ND(0.025)	ND(0.050)	0.84	ND(0.025)
	5/3/2004	79	ND(0.020)	ND(0.020)	0.031	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.28	1.9	ND(0.020)	ND(0.040)	0.91	ND(0.020)
	1/4/2005	79	ND(0.025)	ND(0.025)	0.027	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.57	2.7	ND(0.025)	ND(0.050)	0.95	ND(0.020)
	4/29/2005	79	ND(0.020)	0.02	0.029	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.41	2.0	ND(0.020)	ND(0.040)	0.79	ND(0.020)
	1/4/2006	80	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.49	2.2N	ND(0.020)	ND(0.040)	0.92	ND(0.025)
	4/7/2006	79	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.41	2	ND(0.020)	ND(0.040)	1	ND(0.025)
	2/1/2007	80	ND(0.025)	ND(0.025)	0.028	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.41	2.3	ND(0.025)	ND(0.050)	1.2	ND(0.025)
	4/11/2007	80	ND(0.025)	ND(0.025)	0.033	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.39	2.2	ND(0.025)	ND(0.050)	1.2	ND(0.020)J
	11/13/2007	78	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.5	2.4	ND(0.025)	ND(0.050)	1.2	ND(0.020)
	4/21/2008	79	ND(0.020)J	ND(0.020)J	0.027J	ND(0.020)J	ND(0.020)J	ND(0.040)J	ND(0.020)J	ND(0.040)J	ND(0.10)J	0.57J	2.6J	ND(0.020)J	ND(0.040)J	1.1J	ND(0.020)
	4/3/2009	79	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.51	2.6	ND(0.020)	ND(0.020)	1.4	ND(0.020)
	10/27/2009	78	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.46	2.2	ND(0.020)	ND(0.020)	1.5	ND(0.040)
	4/28/2010	79	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.46	2.3	ND(0.020)	ND(0.020)	1.1	ND(0.040)
	11/15/2010	77	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.38	2.4	ND(0.040)	ND(0.040)	1.1	0.002
	11/15/2010	77	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.38	2.4	ND(0.040)	ND(0.040)	1.1	0.0089
	4/5/2011	77	ND(0.0020)	0.013	0.02	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.26D	1.9D	ND(0.0020)	0.0084	2.2D	ND(0.040)
	10/25/2011	79	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.34	2.2	ND(0.040)	ND(0.040)	1.1	ND(0.0020)
	4/3/2012	77	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.37	2.5	ND(0.040)	ND(0.040)	1.2	ND(0.040)
OB-08-S	8/26/2002	NA	ND(0.0020)	0.002	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.045	0.20D	ND(0.0020)	ND(0.0020)	0.086	ND(0.0025)
	5/3/2004	14	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.041	0.16	ND(0.0020)	ND(0.0040)	0.048	ND(0.0020)
	10/19/2006	NA	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.054	0.26	ND(0.0025)	ND(0.0050)	0.1	ND(0.0025)J
	11/13/2007	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.028	0.14	ND(0.0020)	ND(0.0040)	0.063	ND(0.0020)
	4/21/2008	14	ND(0.0025)J	0.0026J	0.0034J	ND(0.0025)J	ND(0.0025)J	ND(0.0050)J	ND(0.0025)J	ND(0.0050)J	ND(0.013)J	0.079J	0.28J	ND(0.0025)J	ND(0.0050)J	0.10J	ND(0.0025)
	10/20/2008	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.056	0.26	ND(0.0020)	ND(0.0040)	0.092	ND(0.0020)
	4/3/2009	12	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.075	0.31	ND(0.0025)	ND(0.0025)	0.11	ND(0.0025)
	10/27/2009	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.029	0.15	ND(0.0020)	ND(0.0020)	0.062	ND(0.0050)
	4/28/2010	14	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.044	0.21	ND(0.0025)	ND(0.0025)	0.066	ND(0.0050)
	11/15/2010	12	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.069	0.38	ND(0.0050)	ND(0.0050)	0.16	ND(0.10)
	11/15/2010	12	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.069	0.38	ND(0.0050)	ND(0.0050)	0.16	ND(0.0020)
	4/5/2011	12	ND(0.0020)	0.0022	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.081	0.39D	ND(0.0020)	ND(0.0020)	0.12	ND(0.0020)
	10/25/2011	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.038	0.15	ND(0.0020)	ND(0.0020)	0.042	ND(0.10)
	4/2/2012	12	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.056	0.28	ND(0.0050)	ND(0.0050)	0.1	ND(0.0050)
OB-09-BR	6/3/2002	110	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	4.6	9.6	ND(0.20)	ND(0.20)	0.7	ND(0.050)
	6/3/2002	122	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	3.9	9.2	ND(0.20)	ND(0.20)	1.6	ND(0.050)
	1/23/2003	122	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	ND(0.050)	0.1	ND(0.10)	0.4	7.1	ND(0.050)
	5/12/2003	122	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	1.0	1.6	ND(0.10)	ND(0.10)	10	ND(0.050)
	12/15/2003	122	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	ND(0.050)	ND(0.050)	ND(0.050)	0.66	5.7	ND(0.050)

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-09-BR (Cont.)	4/23/2004	120	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.99	1.2	ND(0.050)	0.13	5.9	ND(0.025)	
	12/29/2004	119	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.27	0.35	ND(0.050)	0.17	3.8	ND(0.020)	
	4/27/2005	120	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.72	1.3	ND(0.025)	0.13	2.7	0.0066	
	12/30/2005	122	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	0.34	2.8	ND(0.050)	
	3/27/2006	104.7	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.054	0.073	ND(0.0050)	ND(0.010)	0.43	ND(0.025)	
	1/31/2007	122	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	ND(0.050)	ND(0.050)	ND(0.050)	0.29	4.8	0.014	
	4/10/2007	122	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	ND(0.025)	ND(0.025)	ND(0.025)	1.8	2.3	ND(0.050)	
	7/19/2007	116	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	0.048	0.082	ND(0.0010)	0.0028	0.06	ND(0.0010)
	8/9/2007	116	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	ND(0.050)	ND(0.050)	ND(0.050)	0.32	4.6	ND(0.0010)	
	11/12/2007	105.6	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.001	ND(0.0010)	0.038	0.032	ND(0.0020)J
	1/22/2008	119	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.018	0.015	ND(0.0025)J
	4/21/2008	118	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0040)J	ND(0.0020)J	ND(0.0040)J	ND(0.010)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.12J	0.24J	ND(0.010)
	7/29/2008	121	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0050)J	ND(0.0025)J	ND(0.0050)J	ND(0.013)J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	0.17J	0.36J	ND(0.010)
	10/12/2008	118	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.21	1.2	0.01
	1/14/2009	121	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.23	0.91	ND(0.025)
	4/9/2009	118	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.013	0.016	ND(0.0020)	ND(0.0020)	0.23	ND(0.050)
	7/14/2009	121	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	0.068	0.069	ND(0.025)	0.24	3.6	0.015
	10/22/2009	121	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.45	0.66	ND(0.050)	0.1	5.3	ND(0.050)
	1/28/2010	118	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.011	0.018	ND(0.0050)	0.0081	0.4	0.031J
	4/22/2010	121	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.35	0.66	ND(0.050)	0.14	5.5	ND(0.10)
	7/14/2010	121	ND(0.025)J	ND(0.025)J	0.031J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	0.049J	0.054J	ND(0.025)J	0.23J	4.9J	ND(0.10)
	10/12/2010	117	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.18	0.27	ND(0.10)	0.1	7.9	ND(0.050)
	1/5/2011	121	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.22	6.5	ND(0.010)
	4/6/2011	117.7	ND(0.010)	ND(0.010)	0.021	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.025	0.01	ND(0.010)	0.28	5.5D	ND(0.10)
	7/28/2011	117	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.55	1.2	ND(0.10)	0.15	6.5	ND(0.040)
	10/25/2011	121	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	1.6	1.1	0.033
	1/18/2012	121	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.046	1.4	ND(0.050)
	4/3/2012	117	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	1.9	3.2	ND(0.040)	ND(0.040)	2.5	ND(0.040)
	8/21/2012	100	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	1.6	2.1	ND(0.040)	0.041	7.7D	ND(0.040)
	OB-09-DO	6/3/2002	85	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	4.1	4.7	ND(0.10)	ND(0.10)	3.3	ND(0.050)
		6/3/2002	96	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	4.7	5.7	ND(0.10)	ND(0.10)	3.2	ND(0.010)
		1/23/2003	96	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	0.27	0.9	ND(0.10)	ND(0.10)	9.7	ND(0.025)
5/12/2003		96	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	ND(0.010)	ND(0.010)	ND(0.020)	0.46	2.3	ND(0.010)	
12/15/2003		96	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.064	0.23	ND(0.025)	ND(0.050)	1.9	ND(0.010)	
4/23/2004		94	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.072	0.074	ND(0.010)	ND(0.020)	0.89	ND(0.0050)	
12/29/2004		94	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.029	ND(0.010)	0.043	1.4	ND(0.020)	
4/27/2005		64	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.0051	ND(0.010)	ND(0.025)	0.051	0.073	ND(0.0050)	ND(0.010)	0.4	ND(0.020)	
12/30/2005		96	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.28	0.84	ND(0.020)	0.089	1.9	ND(0.050)	
3/27/2006		94.25	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.8	2.1	ND(0.020)	0.062	1.5	ND(0.0050)	
1/31/2007		96	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.23	0.58	ND(0.050)	0.24	7.1	ND(0.0010)	
4/10/2007		96	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.18J	0.50J	ND(0.0010)	
7/19/2007		95	0.0047	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0026	ND(0.0010)	0.12	0.068	ND(0.0010)
11/12/2007		93.9	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0025	0.0027	ND(0.0010)J
1/22/2008		93	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0027	ND(0.0010)	0.01	0.0049	ND(0.0010)J
4/21/2008		93	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0034J	ND(0.0010)J	ND(0.0020)J	0.0059J	ND(0.0010)
7/29/2008		95	ND(0.0010)J	ND(0.0010)J	0.0017J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0042J	ND(0.0010)J	ND(0.0020)J	0.14J	ND(0.0050)
10/22/2008	93	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.1	0.017	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-09-DO (Cont.)	1/13/2009	95	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.59	0.12	ND(0.010)	
	4/9/2009	92	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0025	0.014	ND(0.0010)	ND(0.0010)	0.007	ND(0.010)	
	7/14/2009	95	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.97	0.11	ND(0.0010)	
	10/28/2009	95	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.87	0.06	ND(0.0025)	
	1/28/2010	92	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0022	0.0043	ND(0.0010)	
	4/22/2010	95	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.3	0.21	ND(0.0050)	
	7/14/2010	95	ND(0.0010)J	0.0033J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.033J	0.0059J	ND(0.020)	
	10/12/2010	93	ND(0.0050)	0.0071	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.42	0.064	ND(0.10)	
	1/5/2011	95	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	1.3	0.35	ND(0.010)	
	4/6/2011	92.3	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	1.4D	0.45	ND(0.040)	
	7/28/2011	92	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	2	0.57	ND(0.040)	
	10/25/2011	92	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.41	1	ND(0.040)	0.15	5.1D	ND(0.040)	
	1/18/2012	92	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	1.9	1.6	ND(0.10)	
	4/3/2012	92	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	1.9	2	ND(0.040)	
	8/21/2012	92	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	1.8D	1.4	ND(0.020)	
OB-09-S	6/3/2002	30	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	4.9	41D	ND(0.20)	ND(0.20)	3	ND(0.10)	
	1/23/2003	30	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	5.3	44D	ND(0.20)	0.3	4.5	ND(0.0010)	
	5/12/2003	30	ND(0.10)	ND(0.10)	0.1	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	8.4	46D	ND(0.20)	0.4	7	ND(0.50)	
	12/15/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.072	0.1	ND(0.0010)	ND(0.0020)	0.0073	ND(0.50)	
	4/23/2004	30	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	21	46	ND(0.50)	ND(1.0)	4.1	ND(0.50)	
	12/29/2004	30	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	18	45	ND(0.50)	ND(1.0)	4.4	ND(0.50)	
	4/27/2005	30	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	25	48	ND(0.50)	ND(1.0)	4	ND(0.50)	
	12/30/2005	30	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	30	53	ND(0.50)	ND(1.0)	4.2	ND(0.0020)	
	3/27/2006	28.5	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	28	50	ND(0.50)	ND(1.0)	4.6	ND(0.020)	
	1/30/2007	30	0.041	0.013	0.0021	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	0.019	ND(0.010)	0.002	0.0074	ND(0.0020)	0.071	0.17	ND(0.020)	
	4/10/2007	30	0.027	0.07	0.025	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.18	2.8	ND(0.020)	0.48	1	0.0021	
	7/19/2007	29.1	0.48	0.67	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	2.4	0.64	0.021	
	11/12/2007	27.9	0.0019	0.031	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.017	ND(0.0020)	ND(0.0050)	0.019	0.064	ND(0.0010)	0.062	0.059	0.068J	
	1/24/2008	29	ND(0.0050)	0.053	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.016	0.068	ND(0.0050)	0.55	0.54	0.043J
	4/21/2008	28	ND(0.050)J	0.087J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.10)J	ND(0.050)J	ND(0.10)J	ND(0.25)J	ND(0.050)J	ND(0.050)J	5.4J	7.0J	0.017	
	7/29/2008	29	0.030J	0.36J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	0.035J	ND(0.050)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	1.2J	0.28J	0.02
	10/22/2008	28	0.36	0.59	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	0.2	ND(0.025)	0.014	0.071	ND(0.0050)	0.13	0.063	ND(0.020)	
	1/13/2009	29	0.039	0.38	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.13	ND(0.010)	0.012	0.062	ND(0.010)	1.2	0.43	0.0037	
	4/9/2009	27.5	0.055	0.023	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.024J	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	1.9	1.4	0.0056	
	7/14/2009	29	0.002	0.049	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.046J	ND(0.0010)	0.0045	0.035	0.0049	0.073	0.025	0.0098	
	10/28/2009	29	ND(0.0050)	0.078	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.046	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.63	0.24	0.0047	
	1/28/2010	27.5	ND(0.0050)	0.097	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.042	ND(0.0050)	ND(0.0050)	0.009	ND(0.0050)	0.49	0.15	0.0024J	
	4/22/2010	29	0.014	0.046	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0036	0.029	ND(0.0010)	0.0019	0.029	ND(0.0010)	0.14	0.048	0.0021
	7/14/2010	29	0.019J	0.25DJ	ND(0.0010)J	0.0024J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.087J	ND(0.0010)J	0.0018J	0.0035J	ND(0.0010)J	0.020J	0.020J	ND(0.0020)	
	10/12/2010	27	0.0045	0.053	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.023	0.061	ND(0.010)	
	1/5/2011	29	ND(0.0020)	0.0089	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.04	ND(0.0020)	ND(0.0020)	0.0074	ND(0.0020)	0.0054	0.0065	0.0028	
	4/5/2011	26.5	0.018	0.039	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.047	ND(0.0020)	ND(0.0020)	0.003	ND(0.0020)	0.076	0.081	ND(0.0020)	
	7/28/2011	26	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0025	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.044	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0031	0.0063	ND(0.0020)	
	10/25/2011	23	0.14	0.89D	0.0042	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.45D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.095	0.018	ND(0.0020)	
	1/18/2012	23.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.56D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0037	ND(0.010)	
4/3/2012	23	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.27	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)		
8/21/2012	23	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0059	ND(0.0020)	ND(0.0020)	0.0048	ND(0.0020)	ND(0.0020)	0.0027	ND(0.0020)		

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-10-BR	6/3/2002	65	ND(0.010)	0.03	0.03	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.03	0.57	ND(0.020)	ND(0.020)	1.0	ND(0.0020)	
	6/3/2002	76	ND(0.010)	0.04	0.04	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.03	0.52	ND(0.020)	0.03	1.4	ND(0.0020)	
	1/23/2003	76	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.027	ND(0.0020)	ND(0.0020)	0.006	ND(0.025)	
	5/13/2003	76	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.011	0.11	ND(0.0020)	0.002	0.61D	ND(0.020)	
	12/15/2003	76	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	ND(0.025)	0.1	ND(0.025)	ND(0.050)	2.0	ND(0.010)	
	4/23/2004	76	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.024)	0.069	ND(0.020)	ND(0.040)	2.1	ND(0.025)	
	4/27/2005	75	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.072	0.73	ND(0.010)	0.048	1.4	ND(0.025)	
	3/27/2006	77	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.76	3.0	ND(0.025)	ND(0.050)	0.74	ND(0.020)	
	4/14/2007	76	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.82	3.1	ND(0.025)	ND(0.050)	1.4	ND(0.010)	
	1/24/2008	74	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.52	2.2	ND(0.020)	ND(0.040)	1.7	ND(0.020)	
	4/23/2008	75	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.19	1.1	ND(0.010)	0.082	1.3	ND(0.020)	
	4/3/2009	74	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.31	1.7	ND(0.020)	0.034	1.6	ND(0.0020)	
	4/21/2010	75	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.079	0.51	ND(0.020)	0.04	2.9	ND(0.0020)	
	4/5/2011	73.4	ND(0.0020)	0.0032	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0043	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/6/2012	73	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.25	1.6	ND(0.020)	ND(0.020)	0.3	ND(0.020)	
	OB-10-DO	6/3/2002	35	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.029	0.71D	ND(0.0020)	ND(0.0020)	0.014	ND(0.0020)
6/3/2002		50	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.015	0.63D	ND(0.0020)	ND(0.0020)	0.015	ND(0.0020)	
1/23/2003		50	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.006	0.54D	ND(0.0020)	ND(0.0020)	0.018	ND(0.0050)	
5/13/2003		50	ND(0.0020)	ND(0.0020)	0.001	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.004	0.55D	ND(0.0020)	ND(0.0020)	0.079	ND(0.0050)	
12/15/2003		50	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.38	ND(0.0050)	ND(0.010)	0.28	ND(0.0050)	
4/23/2004		48	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0069	0.61	ND(0.0050)	ND(0.010)	0.021	ND(0.0050)	
4/27/2005		48	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.018	0.64	ND(0.0050)	ND(0.010)	0.03	ND(0.010)	
3/27/2006		47	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.026	0.66	ND(0.0050)	ND(0.010)	0.029	ND(0.010)	
4/16/2007		49	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.028	0.8	ND(0.010)	ND(0.020)	0.047	ND(0.0050)	
8/9/2007		48	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.026	0.78	ND(0.010)	ND(0.020)	0.062	ND(0.010)	
11/13/2007		47	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.024	0.38	ND(0.0050)	ND(0.010)	0.55	ND(0.010)	
1/24/2008		46	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.034	0.9	ND(0.010)	ND(0.020)	0.092	ND(0.010)J	
4/23/2008		49	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.024	0.81	ND(0.010)	ND(0.020)	0.11	ND(0.0050)	
7/29/2008		49	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	ND(0.020)J	ND(0.050)J	0.030J	0.91J	ND(0.010)J	ND(0.020)J	0.12J	ND(0.0050)	
10/22/2008		48	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.01	0.35	ND(0.0050)	ND(0.010)	0.48	ND(0.010)	
1/13/2009		49	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.017	0.39	ND(0.0050)	ND(0.0050)	0.4	0.014J	
4/1/2009		46	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.034	1.1	ND(0.010)	ND(0.010)	0.66	0.014	
7/14/2010		48.5	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	0.020J	1.2J	ND(0.010)J	ND(0.010)J	0.16J	ND(0.020)	
10/13/2010		46	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	1.1D	0.014	
10/18/2010		78	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.42	2.5D	ND(0.020)	ND(0.020)	1.2	ND(0.0020)	
1/5/2011		48.5	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.37	ND(0.010)	ND(0.010)	0.69	0.013	
4/6/2011		46	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.17	ND(0.010)	ND(0.010)	0.76	0.017	
7/28/2011		46	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.013	0.87	ND(0.010)	ND(0.010)	0.4	0.019	
10/26/2011		48.5	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.25	ND(0.010)	ND(0.010)	0.81	0.023	
1/18/2012		46	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.013	0.92	ND(0.010)	ND(0.010)	0.38	ND(0.0020)	
4/4/2012		46	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.3	ND(0.010)	ND(0.010)	0.74	0.021	
OB-10-S	6/3/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.005	0.013	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	1/23/2003	30	ND(0.0020)	0.007	0.008	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.03	0.18	ND(0.0020)	0.032	1.2D	ND(0.0010)	
	5/13/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/15/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0014	0.029	ND(0.0010)	ND(0.0020)	0.0054	ND(0.0010)
	4/23/2004	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0014	0.0069	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
4/27/2005	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0025	0.0098	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-10-S (Cont.)	3/27/2006	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/16/2007	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	8/9/2007	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	11/13/2007	27	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/25/2008	31	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/25/2008	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	7/29/2008	29	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J
	10/22/2008	27	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/13/2009	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/1/2009	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	7/14/2009	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/27/2009	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	1/28/2010	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/22/2010	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	7/14/2010	29	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J
	10/13/2010	29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/18/2010	12	ND(0.0020)	0.0028	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.09	0.45D	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.23D	ND(0.0020)
	1/5/2011	29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/6/2011	31	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	7/28/2011	29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/26/2011	29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	1/18/2012	29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/4/2012	29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0081	0.02	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	8/21/2012	29	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.011	ND(0.0020)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)
	OB-11-BR	6/3/2002	70	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.038	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
6/3/2002		87	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.041	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
1/27/2003		87	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.008	ND(0.0020)	ND(0.0020)	0.034	ND(0.0010)	
5/12/2003		87	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.007	ND(0.0020)	ND(0.0020)	0.045	ND(0.0010)	
12/16/2003		87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0028	ND(0.0010)	ND(0.0020)	0.035	ND(0.0010)	
5/1/2004		87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.013	ND(0.0010)	
4/28/2005		86	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0085	ND(0.0010)	ND(0.0020)	0.05	ND(0.0010)
3/27/2006		87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.011	ND(0.0010)	ND(0.0020)	0.065	0.002
4/11/2007		86	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0034	ND(0.0010)	0.0048	0.034	0.0021
4/22/2008		85	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.004	ND(0.0010)	0.0092	0.035	ND(0.0020)
4/3/2009		85	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0031	ND(0.0010)	0.004	0.022	0.0045J
4/6/2011		86.1	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.0064J	ND(0.0020)J	0.0027J	0.036J	ND(0.0020)
4/5/2012	86	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0032	ND(0.0020)	ND(0.0020)	0.045	0.0051	
OB-11-DO	6/3/2002	50	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	6/3/2002	62	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.088	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	1/27/2003	62	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.02	ND(0.0020)	ND(0.0020)	0.057	ND(0.0010)	
	5/12/2003	62	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.037	ND(0.0020)	ND(0.0020)	0.041	ND(0.0010)	
	12/16/2003	62	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)	ND(0.0010)	0.04	ND(0.0010)	ND(0.0020)	0.052	ND(0.0010)	
	5/1/2004	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.032	ND(0.0010)	ND(0.0020)	0.045	ND(0.0010)
	4/28/2005	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.065	ND(0.0010)	ND(0.0020)	0.023	ND(0.0010)
	3/27/2006	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.098	ND(0.0010)	ND(0.0020)	0.04	ND(0.0010)
	4/11/2007	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.076	ND(0.0010)	ND(0.0020)	0.031	ND(0.0010)
	4/22/2008	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.073	ND(0.0010)	ND(0.0020)	0.023	ND(0.0020)

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-11-DO (Cont.)	4/3/2009	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.065	ND(0.0010)	ND(0.0010)	0.023	ND(0.0020)J	
	4/6/2011	59.8	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.075J	ND(0.0020)J	ND(0.0020)J	0.021J	ND(0.0020)	
	4/5/2012	59	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.083	ND(0.0020)	ND(0.0020)	0.021	ND(0.0020)	
OB-11-S	6/3/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	1/27/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	5/12/2003	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/16/2003	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/1/2004	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/27/2006	28	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/11/2007	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/22/2008	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.004	
	4/3/2009	29	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.004
	6/3/2002	75	ND(0.0020)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.007	ND(0.0020)	0.029	1.6D	ND(0.010)	
OB-12-BR	6/3/2002	88	ND(0.0020)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.002	0.004	ND(0.0020)	0.028	1.5D	0.094		
	1/27/2003	88	ND(0.010)	ND(0.010)	0.01	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	ND(0.010)	ND(0.010)	ND(0.020)	0.02	8.7D	ND(0.0010)	
	5/13/2003	88	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.033	20D	ND(0.0050)	
	12/16/2003	88	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0084	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/13/2004	86	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0010)	
	4/3/2006	87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0022	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/31/2007	88	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0012	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/16/2007	87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	8/9/2007	82	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	11/13/2007	89	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/24/2008	84	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/22/2008	87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0026	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	7/29/2008	87	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0011J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J	
	10/22/2008	87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0011	0.0022	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/13/2009	87	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	0.023	ND(0.0010)	0.0013	0.037	ND(1.0)	
	4/1/2009	84	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0021	0.051	ND(0.0010)	0.002	0.084	ND(1.0)	
	OB-12-DO	6/3/2002	45	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	3.0	140	ND(2.0)	ND(2.0)	3.0	ND(0.10)
		6/3/2002	59	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	2.0	120	ND(2.0)	ND(2.0)	4.0	ND(1.0)
		1/27/2003	59	ND(0.10)	ND(0.10)	0.2	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	0.4	33D	ND(0.20)	ND(0.20)	91D	ND(0.0010)
5/13/2003		59	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	ND(1.0)	19	ND(2.0)	ND(2.0)	100	ND(1.0)	
12/16/2003		59	ND(0.0010)	0.0062	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0020)	0.0014	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.50)	
5/1/2004		55	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	1.6	94	ND(1.0)	ND(2.0)	11	ND(0.50)	
4/28/2005		60	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	2.3	63	ND(0.50)	ND(1.0)	22	ND(0.0010)	
4/3/2006		53	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	1.8	35	ND(0.50)	ND(1.0)	17	ND(0.10)	
1/31/2007		60	ND(0.0010)	0.0094	ND(0.0010)	0.004	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/16/2007		59	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	1.8	7.8	ND(0.10)	ND(0.20)	1.3	ND(0.0010)	
8/9/2007		48	ND(0.0010)	0.0068	ND(0.0010)	0.0025	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
11/13/2007		59	ND(0.0010)	0.0074	ND(0.0010)	0.003	ND(0.0010)	ND(0.0020)	0.0032	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
1/25/2008		49	ND(0.0010)	0.0084	ND(0.0010)	0.0035	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.20)J	
4/28/2008		59	ND(0.0010)	0.0081	ND(0.0010)	0.0034	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.013	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.50)	
7/29/2008		59	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.40)J	ND(0.20)J	ND(0.40)J	ND(1.0)J	1.8J	17J	ND(0.20)J	ND(0.40)J	4.6J	ND(0.40)
10/22/2008		59	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	1.8	36	ND(0.50)	ND(1.0)	15	ND(0.50)	
1/13/2009		59	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	2.3	39	ND(0.40)	ND(0.40)	18	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-12-DO (Cont.)	4/1/2009	50	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	2.1	43	ND(0.50)	ND(0.50)	20	ND(0.0010)	
	10/27/2009	50	ND(0.0010)	0.0078	ND(0.0010)	0.0027	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	5/7/2010	57	ND(0.0010)	0.0075	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.088	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.014	
	7/14/2010	59	ND(0.0010)	0.0084	ND(0.0010)	0.0034	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.27	0.0038	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.018	
	10/13/2010	46	ND(0.0020)	0.0076	0.024	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	1.4D	21D	ND(0.0020)	ND(0.0020)	8.7D	ND(0.010)	
	1/5/2011	59	ND(0.0050)	0.0075	0.053	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	2.2D	45D	ND(0.0050)	0.0066	24D	ND(0.50)	
	4/6/2011	49.1	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	2.1	33	ND(0.50)	ND(0.50)	17	ND(0.0020)	
	7/28/2011	59	ND(0.0020)	0.0068	ND(0.0020)	0.0022	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/26/2011	48	ND(0.0020)	0.0069	ND(0.0020)	0.0022	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0034	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.013	
	1/17/2012	48.5	ND(0.0020)	0.008	0.018	0.0021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	1.8D	15D	ND(0.0020)	ND(0.0020)	5.5D	ND(0.010)	
	4/4/2012	48	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	2.5	37	ND(0.40)	ND(0.40)	19	ND(0.40)	
	OB-12-S	6/3/2002	30	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.72	1.4	ND(0.020)	ND(0.020)	0.01	ND(0.010)
		1/27/2003	30	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.69	1.7	ND(0.020)	ND(0.020)	0.02	ND(0.0010)
5/13/2003		30	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.61	1.3	ND(0.020)	ND(0.020)	0.01	ND(0.0050)	
12/16/2003		30	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0064	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
5/13/2004		30	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)	
4/28/2005		30	0.0039	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0025)	
4/3/2006		28	0.0067	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.45	0.45	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)	
1/31/2007		30	0.0052	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0032	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.28	0.28	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0025)	
4/16/2007		26	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.36	0.33	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)	
8/9/2007		26	0.0041	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.26	0.19	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0020)
11/13/2007		26	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0065	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.41	0.4	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0025)	
1/25/2008		27	0.0036	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0032	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.23	0.18	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0025)	
4/22/2008		29	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.16	0.12	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0020)	
7/29/2008		29	0.0028	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0033	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.28	0.15	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0025)	
10/22/2008		29	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0039	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.28	0.19	ND(0.0020)	ND(0.0040)	0.0022	ND(0.0020)	
1/13/2009		29	0.0041	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0051	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.25	0.18	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	
4/1/2009		26	0.0021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.17	0.11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
7/14/2009		29	0.0048	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0061	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.26	0.19	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0010)	
10/27/2009		26	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.088	0.022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
1/28/2010		26	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.072	0.015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
4/22/2010		29	0.0023	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.089	0.055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0040)	
7/14/2010		29	0.0043	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0039	ND(0.0010)	0.0025	ND(0.0010)	ND(0.0010)	0.22	0.14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	
10/13/2010		26	0.005	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.0052	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.22	0.15	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.010)	
1/5/2011		29	0.0038	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0034	ND(0.0020)	0.0026	ND(0.0020)	ND(0.0020)	0.17	0.098	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
4/6/2011		27.7	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.15	0.071	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
7/28/2011		26	0.0033	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0025	ND(0.0020)	0.0023	ND(0.0020)	ND(0.0020)	0.19	0.12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
10/26/2011		26	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.058	0.021	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
1/17/2012	26.5	0.0041	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0037	ND(0.0020)	0.0033	ND(0.0020)	ND(0.0020)	0.19	0.14	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)		
4/4/2012	26	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.2	0.11	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)		
8/21/2012	27.7	0.0042	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.0043	ND(0.0040)	ND(0.0040)	0.19	0.13	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)		
OB-14-DO	6/3/2002	45	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.1	1.4	ND(0.020)	ND(0.020)	0.3	ND(0.010)	
	6/3/2002	60	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.07	1.4	ND(0.020)	ND(0.020)	0.35	ND(0.010)	
	1/23/2003	60	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	ND(0.010)	1	ND(0.020)	ND(0.020)	0.05	ND(0.010)	
	5/13/2003	60	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.06	0.76	ND(0.020)	ND(0.020)	0.98	ND(0.010)	
	12/17/2003	60	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.050)	0.23	1.2	ND(0.010)	ND(0.020)	0.41	ND(0.010)
	5/1/2004	58	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.14	1.1	ND(0.010)	ND(0.020)	0.25	ND(0.010)

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohier Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-14-DO (Cont.)	4/28/2005	58	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.11	0.97	ND(0.010)	ND(0.020)	0.28	ND(0.010)	
	3/27/2006	56	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.091	0.83	ND(0.010)	ND(0.020)	0.23	ND(0.010)	
	4/11/2007	55	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.12	1.1	ND(0.010)	ND(0.020)	0.31	ND(0.010)	
	4/22/2008	59	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.096	0.81	ND(0.010)	ND(0.020)	0.24	ND(0.010)	
	4/3/2009	55	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.086	0.84	ND(0.010)	ND(0.010)	0.21	ND(0.020)J	
	4/6/2011	55.4	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	0.096J	1J	ND(0.020)J	ND(0.020)J	0.17J	0.09	
4/5/2012	55	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.095	1.2	ND(0.020)	ND(0.020)	0.13	ND(0.020)	
OB-15-S	6/3/2002	20	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	1.9	1.1	ND(0.020)	ND(0.020)	0.53	0.011	
	1/23/2003	20	0.05	ND(0.010)	0.02	ND(0.010)	ND(0.010)	ND(0.010)	0.04	ND(0.050)	ND(0.020)	2	3.8D	ND(0.020)	0.04	3.9D	ND(0.0050)	
	5/12/2003	20	0.043	0.005	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.004	ND(0.010)	ND(0.010)	0.50D	2.1D	ND(0.0020)	0.052	2.5D	ND(0.0010)	
	12/16/2003	20	0.086	0.014	ND(0.0050)	ND(0.0050)	0.0088	ND(0.010)	0.0058	ND(0.010)	ND(0.025)	0.4	0.041	ND(0.0050)	ND(0.010)	0.078	ND(0.0025)	
	4/23/2004	20	0.11	0.0045	ND(0.0010)	ND(0.0010)	0.075	ND(0.0020)	0.024	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0022	ND(0.0020)	ND(0.0010)	ND(0.010)	
	4/27/2005	20	0.28	0.0047	ND(0.0025)	ND(0.0025)	0.065	ND(0.0050)	0.034	ND(0.0050)	ND(0.013)	0.13	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0020)	
	4/3/2006	19	0.071	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	1.3	0.16	ND(0.010)	ND(0.020)	0.064	ND(0.020)	
	4/10/2007	20	0.18	0.0022	ND(0.0020)	ND(0.0020)	0.033	ND(0.0040)	0.016	ND(0.0040)	ND(0.010)	0.0047	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.050)J	
	4/25/2008	NA	0.24	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.6	0.76	ND(0.020)	ND(0.040)	0.38	ND(0.025)	
	7/29/2008	19	3.0J	ND(0.050)J	0.11J	ND(0.050)J	ND(0.050)J	ND(0.10)J	ND(0.050)J	ND(0.10)J	ND(0.25)J	3.0J	3.7J	ND(0.050)J	ND(0.10)J	0.13J	ND(0.50)	
	10/21/2008	19	1.2	ND(0.025)	0.042	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	2.9	2.8	ND(0.025)	ND(0.050)	0.86	ND(0.10)	
	1/13/2009	19	0.5	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	6.1	4.3	ND(0.050)	ND(0.050)	0.76	ND(0.10)	
	4/1/2009	18	0.25	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	4.4	4.4	ND(0.10)	ND(0.10)	7.6	ND(0.050)	
	7/14/2009	19	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.21	ND(0.10)	0.78	9.5	ND(0.050)	
	10/27/2009	18	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.092	ND(0.050)	1.3	4.4	ND(0.050)	
	1/28/2010	18	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.13	0.27	ND(0.050)	1.4	5.6	0.0021J	
	4/22/2010	19	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	1.2	3.7	ND(0.0020)	
	7/14/2010	19	0.0044J	0.0054J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	0.0011J	ND(0.0010)J	0.0060J	0.0044J	0.0022	
	10/12/2010	19	0.0026	0.0085	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.013	0.014	ND(0.0020)	
	1/4/2011	19	ND(0.0020)	0.0022	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0065	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.1	0.11	ND(0.010)
	4/6/2011	18.7	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.05	ND(0.010)	0.53	1.2D	ND(0.0020)	
	7/28/2011	19	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0020)	0.012	ND(0.0020)	0.04	0.026	ND(0.0020)	
	10/25/2011	18.5	ND(0.0020)	0.0051	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0054	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.18	0.15	ND(0.0020)	
	1/17/2012	18.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0043	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0052	0.0045	ND(0.0020)
	4/3/2012	18.75	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.64	1.4	ND(0.020)
	8/21/2012	18.6	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.02	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0088	0.024	ND(0.0020)
	OB-16-BR	6/3/2002	33	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.013	0.041	ND(0.0020)	ND(0.0020)	0.006	ND(0.0010)
5/14/2003		33	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.011	ND(0.0020)	ND(0.0020)	0.003	ND(0.0010)	
12/16/2003		33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0031	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/27/2004		33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/28/2005		33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
3/28/2006		32.1	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J	
4/10/2007		33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/21/2008		32	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0024J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
4/3/2009		32	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
4/20/2010		32	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
4/5/2011		32	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
4/5/2012		32	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)



**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohier Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-16-S	6/25/2002	17.5	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.021	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	5/14/2003	17.5	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/16/2003	17.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/27/2004	17.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/28/2006	15.7	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.002	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J	
	4/10/2007	18	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/21/2008	17	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0021J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J	
	4/3/2009	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/20/2010	17	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/6/2011	15	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)
	4/5/2012	15.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
OB-17-BR	6/3/2002	55	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.32	0.71	ND(0.020)	ND(0.020)	0.03	ND(0.010)	
	6/3/2002	70	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.41	0.71	ND(0.020)	ND(0.020)	0.04	ND(0.0020)	
	6/3/2002	98	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.46	0.71	ND(0.020)	ND(0.020)	0.04	ND(0.0050)	
	5/15/2003	98	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.010)	0.19	0.54	ND(0.0040)	ND(0.0040)	0.052	ND(0.0050)	
	12/18/2003	98	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.23	0.42	ND(0.0050)	ND(0.010)	0.057	ND(0.0050)	
	5/2/2004	98	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.21	0.46	ND(0.0050)	ND(0.010)	0.058	ND(0.0050)	
	5/19/2005	87	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.41	ND(0.0050)	
	4/7/2006	98	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.66	ND(0.0050)	
	4/12/2007	98	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.0054	ND(0.0050)	ND(0.010)	0.6	ND(0.0025)	
	4/22/2008	97	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.57	ND(0.0025)	
	4/1/2009	95	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.018	0.37	ND(0.0020)
	4/21/2010	97	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.17	0.11	ND(0.0020)
	4/4/2011	96	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.13	0.039	ND(0.0020)
	4/2/2012	98	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.13	ND(0.0020)	ND(0.0020)
OB-17-DO	6/3/2002	30	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.027	0.038	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	6/3/2002	43	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.032	0.046	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	5/15/2003	43	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.037	0.052	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/18/2003	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.005	ND(0.0020)	ND(0.0050)	0.027	0.033	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J	
	5/2/2004	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0020)	ND(0.0050)	0.031	0.035	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/2/2005	42	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.026J	0.030J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)	
	4/7/2006	41	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.021	0.025	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/12/2007	43	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.016	0.017	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/22/2008	42	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.02	0.022	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/1/2009	41	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.017	0.019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	
	4/21/2010	42	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.016	0.018	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	
	4/4/2011	41	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.014	0.015	ND(0.0020)	ND(0.0020)J	ND(0.0020)	ND(0.0050)	
	4/2/2012	41.24	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.013	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	OB-18-DO	8/26/2002	NA	ND(0.0020)	0.003	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.048	0.50D	ND(0.0020)	0.004	0.15	ND(0.0050)
5/14/2003		30	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.030)	ND(0.010)	ND(0.010)	0.03	0.7	ND(0.010)	ND(0.010)	0.33	ND(0.0050)	
12/23/2003		30	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.03	0.39	ND(0.0050)	ND(0.010)	0.12	ND(0.0010)	
5/3/2004		25	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.039	0.47	ND(0.0050)	ND(0.010)	0.15	ND(0.0050)	
4/29/2005		25	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.018	ND(0.0010)	ND(0.0020)	0.0073	ND(0.0025)	
4/7/2006		24	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.04	0.47	ND(0.0050)	ND(0.010)	0.15	0.0026	
4/13/2007		30	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.02	0.21	ND(0.0025)	ND(0.0050)	0.12	ND(0.0010)	
11/14/2007		23	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.0096	0.12	ND(0.0025)	ND(0.0050)	0.31	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2-DCE (mg/l)	trans-1,2-DCE (mg/l)	
OB-18-DO (Cont.)	4/22/2008	29	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0064	0.12	ND(0.0010)	0.0045	0.12	ND(0.0010)	
	4/2/2009	23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0051	0.088	ND(0.0010)	0.0016	0.056	ND(0.010)	
	10/26/2009	23	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	0.012	0.11	ND(0.0010)	ND(0.0010)	0.048	0.0032	
	4/20/2010	25	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.071	0.7	ND(0.010)	0.013	0.47	ND(0.0020)	
	10/14/2010	24	ND(0.0020)	0.0023	0.0038	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.035	0.36D	ND(0.0020)	0.016	0.46D	ND(0.0020)	
	4/5/2011	23	ND(0.0020)	0.0027	0.0048	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.076	0.63D	ND(0.0020)	0.051	0.66D	ND(0.0020)	
	10/25/2011	23	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.027	0.16	ND(0.0020)	0.007	0.099	ND(0.0020)	
	4/5/2012	23.8	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.018	0.23	ND(0.0050)	0.024	0.37	ND(0.0050)	
OB-18-S	8/26/2002	NA	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.022	ND(0.0020)	0.002	0.017	ND(0.0020)	
	9/18/2002	NA	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.015	ND(0.0020)	0.003	0.011	ND(0.0020)	
	1/28/2003	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.056	ND(0.0020)	ND(0.0020)	0.026	ND(0.0010)	
	5/14/2003	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.002	0.077	ND(0.0020)	0.002	0.048	ND(0.0010)	
	12/23/2003	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	ND(0.0050)
	5/3/2004	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0098	ND(0.0010)	ND(0.0020)	0.0032	ND(0.0010)
	4/29/2005	12	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.041	0.47	ND(0.0050)	ND(0.010)	0.13	ND(0.0010)	
	4/7/2006	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.007	ND(0.0010)	ND(0.0020)	0.0022	ND(0.0010)
	2/1/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.01	ND(0.0010)	ND(0.0020)	0.004	ND(0.0010)
	4/13/2007	15	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0071	ND(0.0010)	ND(0.0020)	0.002	ND(0.0010)
	11/14/2007	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/22/2008	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.001	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/20/2008	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.013	ND(0.0010)	ND(0.0020)	0.0048	ND(0.0010)
	4/2/2009	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	10/26/2009	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0082
	4/20/2010	14	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	0.0011	ND(0.10)
	10/14/2010	11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0026	0.0082	ND(0.0020)	0.019	0.07	ND(0.0020)
	4/5/2011	11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/25/2011	11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.10)
	4/5/2012	11.2	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0049	ND(0.0020)	ND(0.0020)	0.0026	ND(0.0020)
OB-19-BR	6/3/2002	80	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	7.3	29	ND(0.20)	ND(0.20)	7.4	0.1	
	6/3/2002	92	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	11	44D	ND(0.20)	ND(0.20)	9.6	ND(0.0020)	
	1/28/2003	92	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	12	70D	ND(0.20)	0.3	3.2	ND(0.0010)	
	5/13/2003	92	ND(0.0020)	0.018	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	12/17/2003	92	ND(0.0010)	0.0047	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0044	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/26/2004	92	ND(0.0010)	0.0073	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	12/28/2004	91	ND(0.0010)	0.011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0092	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	92	ND(0.0010)	0.015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0044	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/3/2006	92	ND(0.0010)	0.015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0019	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/31/2006	82	ND(0.0010)	0.013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0014	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/31/2007	92	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.83	2.8	ND(0.020)	ND(0.040)	1.2	ND(0.020)
	4/16/2007	82	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0067	0.0082	ND(0.0050)	ND(0.010)	0.59	ND(0.025)
	8/9/2007	80	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.027	0.17	ND(0.020)	ND(0.040)	2.3	0.02
	11/15/2007	82	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.27	2	ND(0.025)	ND(0.050)	2.9	0.024
	1/24/2008	83	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.17	2.2	ND(0.020)	ND(0.040)	2.9	ND(0.050)J
	4/22/2008	91	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.16	2.3	ND(0.020)	ND(0.040)	2.9	ND(0.050)
	7/29/2008	91	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.10)J	ND(0.050)J	ND(0.10)J	ND(0.25)J	0.61J	3.2J	ND(0.050)J	ND(0.10)J	3.6J	ND(0.10)
	10/21/2008	91	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.34	4.3	ND(0.050)	ND(0.10)	3.2	ND(0.10)
	1/13/2009	91	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.85	9.4	ND(0.10)	ND(0.10)	4.7	0.053J
	4/9/2009	82	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	1	12	ND(0.10)	ND(0.10)	6	ND(1.0)
7/14/2010	91	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	ND(0.050)J	0.39J	6.3J	ND(0.050)J	0.13J	5.8J	0.2	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)		
OB-19-DO	6/3/2002	50	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	47	160	ND(2.0)	ND(2.0)	2.0	ND(0.0020)		
	6/3/2002	65	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	28	210D	ND(0.20)	0.7	1.8	0.1		
	1/28/2003	65	ND(0.0020)	0.005	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.004	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.50)		
	5/13/2003	65	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	11	55	ND(0.20)	0.6	18	ND(0.50)		
	12/17/2003	65	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	11	53	ND(0.50)	ND(1.0)	2.9	ND(0.0010)		
	4/26/2004	59	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	11	46	ND(0.50)	ND(1.0)	17	ND(0.020)		
	12/28/2004	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0029	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.010)	
	4/28/2005	65	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.1	1.6	ND(0.020)	ND(0.040)	0.45	0.03	
	1/19/2006	65	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.2	0.9	ND(0.010)	ND(0.020)	0.6	0.012	
	3/31/2006	55	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.14	0.87	ND(0.010)	ND(0.020)	0.09	0.71	0.076
	1/31/2007	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0088	0.11	ND(0.0010)	0.013	0.052	0.072	
	4/11/2007	65	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.13	0.97	ND(0.010)	0.14	0.83	0.07	
	11/15/2007	54	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.11	0.8	ND(0.010)	0.09	0.69	0.065J	
	4/22/2008	64	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.14	0.85	ND(0.010)	0.12	0.78	0.054	
	7/29/2008	64	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	ND(0.020)J	ND(0.050)J	0.17J	0.92J	ND(0.010)J	0.11J	0.71J	ND(0.20)	
	10/21/2008	64	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.33	1.8	ND(0.020)	0.092	1.1	ND(0.20)	
	1/13/2009	64	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	8.7	17	ND(0.20)	ND(0.20)	2.3	0.075J	
	4/9/2009	57	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	8.1	17	ND(0.20)	ND(0.20)	2.1	0.058	
	7/14/2010	64	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	0.52J	2.6J	ND(0.020)J	0.10J	1.4J	0.064	
	10/13/2010	57	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.25	0.94	ND(0.020)	0.085	1.9D	ND(0.0020)	
	1/5/2011	64	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.87	3.2	ND(0.040)	0.1	1.5	0.051	
	4/4/2011	57	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.46	1.8	ND(0.020)	0.066J	1.4	0.061	
	7/28/2011	57	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.74	2.8	ND(0.040)	0.11	1.7	0.053	
	10/26/2011	64	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.72	3.2D	ND(0.020)	0.079	1.3	0.066	
	1/17/2012	56.5	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.82	3.1	ND(0.040)	0.094	1.5	ND(0.0020)	
4/4/2012	57	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.8	3.1	ND(0.040)	0.1	1.5	0.066		
OB-19-S	6/3/2002	35	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.003	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	1/28/2003	35	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/13/2003	35	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	12/17/2003	35	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.0016	0.0044	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/26/2004	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0015	0.0029	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/28/2006	33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/11/2007	33	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/22/2008	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	10/21/2008	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/3/2009	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.013	
	4/20/2010	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.013	
	4/20/2010	34	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	
4/5/2011	32.7	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)		
4/5/2012	32	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)		
OB-20-BR	9/3/2004	NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.010)	0.3	ND(0.010)	ND(0.020)	0.99	ND(0.010)J		
	1/3/2005	98	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	ND(0.010)	0.3	ND(0.010)	ND(0.020)	1.1	ND(0.0010)		
	5/2/2005	97	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	ND(0.020)J	ND(0.050)J	ND(0.010)J	0.24J	ND(0.010)J	ND(0.020)J	0.88J	ND(0.0010)		
	1/6/2006	101	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/30/2006	96	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	2/1/2007	101	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-20-BR (Cont.)	4/12/2007	100	ND(0.0010)	0.0013	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	11/14/2007	99	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/23/2008	96	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/6/2009	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/27/2009	95	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/28/2010	100	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/13/2010	96	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0027	ND(0.0020)	ND(0.0020)	0.014	ND(0.0020)
	4/6/2011	95	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.056	ND(0.0020)	ND(0.0020)	0.29D	0.002
	10/26/2011	97	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0031	0.13	ND(0.0020)	0.0024	0.47D	ND(0.0010)	
	4/6/2012	94.75	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.024	ND(0.0040)	ND(0.0040)	0.19	ND(0.0040)	
OB-20-DO	9/3/2004	NA	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0041	ND(0.0020)	ND(0.0050)	0.017	0.089	ND(0.0010)	ND(0.0020)	0.05	0.0031J	
	1/3/2005	78	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/2/2005	78	ND(0.0025)J	ND(0.0025)J	0.0035J	ND(0.0025)J	ND(0.0025)J	ND(0.0025)J	ND(0.0050)J	ND(0.0025)J	ND(0.0050)J	ND(0.013)J	0.011J	0.050J	ND(0.0025)J	0.0071J	0.34J	ND(0.0010)
	1/6/2006	78	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0013	ND(0.0020)	ND(0.0050)	0.0036	ND(0.0010)	ND(0.0010)	0.0034	ND(0.0010)	
	3/30/2006	77	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.001	ND(0.0020)	ND(0.0050)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	2/1/2007	78	ND(0.0010)	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/12/2007	76	ND(0.0050)	ND(0.0050)	0.0051	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0092	0.045	ND(0.0050)	0.011	0.49	ND(0.0050)
	11/14/2007	75	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0084	0.042	ND(0.0050)	ND(0.010)	0.46	ND(0.0050)
	4/23/2008	77	ND(0.0050)	ND(0.0050)	0.0058	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0086	0.043	ND(0.0050)	0.016	0.47	ND(0.0025)
	4/6/2009	75	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.031	ND(0.0050)	0.0075	0.42	ND(0.0050)
	10/27/2009	75	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0058	0.076	ND(0.0025)	ND(0.0025)	0.25	ND(0.0040)
	4/23/2010	77	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.012	ND(0.0050)	ND(0.0050)	0.34	ND(0.0010)	
	10/13/2010	75	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.014	ND(0.0040)	0.005	0.45D	ND(0.0020)	
	4/6/2011	75	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0036	0.023	ND(0.0020)	ND(0.0020)	0.19	ND(0.0050)
	10/26/2011	75	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.012	ND(0.0050)	0.027	0.47	ND(0.0010)	
	4/6/2012	74.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
OB-20-S	9/2/2004	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0033	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J	
	1/3/2005	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0013	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	5/2/2005	12	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	0.0018J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	
	1/6/2006	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	3/30/2006	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0042	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	2/1/2007	13	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0019	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/12/2007	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0015	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	11/14/2007	11.1	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/23/2008	16	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	10/23/2008	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0018	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	4/6/2009	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	10/27/2009	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/23/2010	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0061	
	10/13/2010	11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/6/2011	11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	10/26/2011	12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
4/6/2012	10.9	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)		
OB-21-BR	9/2/2004	NA	ND(0.0050)	0.012	0.013	ND(0.0050)	ND(0.0050)	ND(0.010)	0.0092	ND(0.010)	ND(0.025)	0.11	0.52	ND(0.0050)	0.013	0.47	ND(0.010)J	
	1/3/2005	97	ND(0.010)	0.018	0.022	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.11	0.79	ND(0.010)	0.021	0.74	ND(0.020)	
	5/2/2005	100	ND(0.010)J	0.018J	0.024J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	ND(0.020)J	ND(0.050)J	0.096J	0.79J	ND(0.010)J	0.023J	0.80J	0.01	
	1/6/2006	104	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.033	0.28	ND(0.020)	ND(0.040)	1.4	0.0071	
	3/30/2006	101	ND(0.010)	0.021	0.03	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.04	0.44	ND(0.010)	0.033	1.4	ND(0.020)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohier Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-21-BR (Cont.)	2/1/2007	98	ND(0.0050)	0.015	0.019	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.042	0.16	ND(0.0050)	0.019	0.68D	ND(0.010)	
	4/12/2007	102	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.020)	0.036	ND(0.020)	ND(0.040)	1.6	ND(0.010)	
	11/14/2007	99	ND(0.010)	0.012	0.013	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.031	0.19	ND(0.010)	ND(0.020)	1.0	ND(0.0050)	
	4/23/2008	98	ND(0.010)	0.014	0.02	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.018	0.15	ND(0.010)	0.026	1.2	ND(0.010)	
	4/6/2009	97	ND(0.0050)	0.008	0.0087	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.037	0.16	ND(0.0050)	0.012	0.74	ND(0.010)	
	10/27/2009	97	ND(0.010)	ND(0.010)	0.012	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.043	0.12	ND(0.010)	0.014	1.0	ND(0.020)	
	4/28/2010	97	ND(0.010)	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.063	0.45	ND(0.010)	0.014	1.1	ND(0.0010)	
	10/13/2010	97	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.13	ND(0.020)	0.03	1.6	0.0043	
	4/6/2011	98.2	ND(0.0040)	0.0092	0.011	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.013	0.14	ND(0.0040)	0.017	1.5D	ND(0.020)	
	10/26/2011	97	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.033	0.061	ND(0.020)	0.022	1.5	ND(0.0050)	
	4/6/2012	99.5	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.49	ND(0.010)	
	OB-21-DO	9/2/2004	NA	ND(0.0010)	0.0014	0.0011	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0011	ND(0.0020)	ND(0.0050)	0.025	0.081	ND(0.0010)	ND(0.0020)	0.031	ND(0.0050)J
		1/3/2005	82	ND(0.0050)	0.0088	0.011	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.099	0.28	ND(0.0050)	ND(0.010)	0.55	ND(0.0050)
5/2/2005		82	ND(0.0050)J	0.0087J	0.011J	ND(0.0050)J	ND(0.0050)J	ND(0.010)J	ND(0.0050)J	ND(0.010)J	ND(0.025)J	0.18J	0.50J	ND(0.0050)J	ND(0.010)J	0.34J	ND(0.0050)	
1/6/2006		86	ND(0.0050)	0.0068	0.0083	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.22	0.66	ND(0.0050)	ND(0.010)	0.22	ND(0.010)	
3/30/2006		81	ND(0.0050)	0.01	0.012	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.23	0.64	ND(0.0050)	ND(0.010)	0.21	ND(0.010)	
2/1/2007		NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.23	0.76	ND(0.010)	ND(0.020)	0.25	ND(0.010)	
4/12/2007		81	ND(0.010)	0.013	0.016	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.35	1.1	ND(0.010)	ND(0.020)	0.32	ND(0.010)	
11/14/2007		79	ND(0.010)	ND(0.010)	0.011	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.29	0.91	ND(0.010)	ND(0.020)	0.35	ND(0.0050)	
4/23/2008		79	ND(0.010)	0.01	0.012	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.26	0.81	ND(0.010)	ND(0.020)	0.28	ND(0.0050)	
4/6/2009		79	ND(0.0050)	0.0069	0.0074	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.21	0.71	ND(0.0050)	ND(0.0050)	0.27	ND(0.010)	
10/27/2009		79	ND(0.0050)	0.0097	0.01	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.17	0.61	ND(0.0050)	ND(0.0050)	0.42	ND(0.020)	
4/28/2010		79	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.32	1.1	ND(0.010)	ND(0.010)	0.49	ND(0.0010)	
10/13/2010		79	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.32	1.4	ND(0.020)	ND(0.020)	0.47	ND(0.020)	
4/6/2011		79	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.34	1.3	ND(0.020)	ND(0.020)	0.41	ND(0.010)	
10/26/2011		79	ND(0.010)	ND(0.010)	0.011	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.28	1.4D	ND(0.010)	ND(0.010)	0.51	ND(0.0050)	
4/6/2012		78.5	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.22	1	ND(0.020)	ND(0.020)	0.39	ND(0.020)	
OB-22-DO		9/3/2004	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.015	ND(0.0020)	ND(0.0050)	0.011	0.025	ND(0.0010)	ND(0.0020)	0.014	ND(0.0050)J
	1/4/2005	59	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	0.0053	ND(0.010)	ND(0.025)	0.0072	0.005	ND(0.0050)	ND(0.010)	0.4	ND(0.0050)	
	5/2/2005	58	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.010)J	ND(0.0050)J	ND(0.010)J	ND(0.025)J	0.039J	0.040J	ND(0.0050)J	ND(0.010)J	0.70J	ND(0.0050)	
	1/4/2006	59	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.15	0.23	ND(0.0050)	ND(0.010)	0.62	ND(0.0050)	
	4/7/2006	57	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.064	0.13	ND(0.0050)	ND(0.010)	0.63	ND(0.0050)	
	2/1/2007	59	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.35	0.57	ND(0.0050)	ND(0.010)	0.38	ND(0.0050)	
	4/15/2007	59	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.22	0.35	ND(0.0050)	ND(0.010)	0.41	ND(0.0010)	
	11/16/2007	58	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.22	0.39	ND(0.0050)	ND(0.010)	0.24	ND(0.0050)	
	4/23/2008	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.055	0.054	ND(0.0010)	ND(0.0020)	0.013	ND(0.0025)	
	4/6/2009	56	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.38	0.58	ND(0.0050)	ND(0.0050)	0.15	ND(0.0040)	
	10/27/2009	57	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.066	0.25	ND(0.0025)	0.0039	0.28	ND(0.0020)	
	10/12/2010	56	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.023	0.054	ND(0.0040)	0.032	0.40D	ND(0.0020)	
	10/25/2011	55	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0069	ND(0.0020)	ND(0.0020)	0.031	ND(0.0020)	
	OB-23-BR	6/13/2002	55	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.014	0.023	ND(0.0020)	ND(0.0020)	0.006	ND(0.0020)
		6/13/2002	70	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.019	0.063	ND(0.0020)	ND(0.0020)	0.009	ND(0.0010)
		6/13/2002	98	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.016	0.069	ND(0.0020)	ND(0.0020)	0.01	ND(0.0010)
		5/1/2004	85	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.1	0.01
4/7/2006		83	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0027	ND(0.0010)	ND(0.0020)	0.052	ND(0.0010)	
4/1/2009		95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
4/21/2010		97	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0010)	0.071	0.065	ND(0.0020)	
4/4/2011		83	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.062J	0.013	ND(0.0020)	
4/5/2012		83.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.1	0.07	ND(0.0020)

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohier Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-24-S	6/3/2002	3	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/14/2003	3	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	12/18/2003	3	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/27/2004	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0038	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/31/2006	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/11/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/3/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0018	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.10)
	4/21/2010	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
	4/5/2011	2	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
4/5/2012	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
OB-25-BR	6/18/2003	NA	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	6.9	20	ND(0.20)	ND(0.20)	7.1	ND(0.0010)	
	12/17/2003	100	ND(0.0010)	0.011	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/26/2004	98	ND(0.0010)	0.023	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	97	ND(0.0010)	0.024	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0021	ND(0.0020)	ND(0.0050)	0.0019	0.022	ND(0.0010)	ND(0.0020)	0.0056	ND(0.020)	
	3/31/2006	97	ND(0.0010)	0.019	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0052	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.050)	
	4/11/2007	96	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.22	1.9	ND(0.020)	ND(0.040)	1.2	ND(0.50)	
	4/22/2008	99	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.4	4.9	ND(0.050)	ND(0.10)	2.2	ND(0.50)	
	4/3/2009	95	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	1.5	ND(0.50)	18	64	ND(0.50)J	
	4/20/2010	99	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	0.51	3.8	ND(0.50)	21	56	ND(0.50)	
	7/14/2010	99.5	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	2.9J	ND(0.50)J	20J	65J	ND(0.0020)		
	10/13/2010	97	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	2.7	ND(0.50)	21	67D	ND(0.0020)		
	4/14/2011	101	ND(0.0020)	0.023	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.40)	
	10/26/2011	99.5	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	1.9	8.8	ND(0.40)	4.0	22	ND(0.0010)	
	4/5/2012	90	ND(0.0020)	0.037	0.11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.69D	7.8D	ND(0.0020)	6.8D	30D	0.14	
OB-25-DO	6/26/2003	NA	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/17/2003	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/26/2004	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	4/28/2005	69	0.01	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	3/31/2006	70	0.0035	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.10)J	
	4/14/2007	70	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.7	2.6	ND(0.025)	ND(0.050)	1.4	ND(0.10)	
	7/14/2010	69	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	1.0J	13J	ND(0.10)J	ND(0.10)J	1.3J	ND(0.0010)	
OB-26-BR	6/19/2003	NA	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	5.9	27	ND(0.20)	ND(0.20)	2.8	ND(0.0010)	
	12/17/2003	96	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.021	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/26/2004	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.050)	
	4/28/2005	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.025)	
	3/31/2006	94	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	0.086	3.4	ND(0.050)	ND(0.10)	0.71	ND(0.0010)	
	4/11/2007	93	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	0.06	2.2	ND(0.025)	ND(0.050)	0.86	ND(0.0050)	
	4/22/2008	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0052	0.11	ND(0.0010)	ND(0.0020)	0.045	ND(0.0010)	
	4/3/2009	93	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.019	0.48	ND(0.0050)	ND(0.0050)	0.19	ND(1.0)	
	4/20/2010	95	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	
	4/4/2011	93.1	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)J	ND(0.0020)	ND(0.0010)	
	4/17/2012	95	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0039	0.031	ND(0.0020)	0.011	0.28D	ND(0.0020)	
OB-26-DO	7/2/2003	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	24	210	ND(2.0)	ND(2.0)	ND(1.0)	ND(0.0010)	
	12/17/2003	66	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/26/2004	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	66	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0014	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.10)	
	3/31/2006	63	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)	
4/14/2007	66	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	1.8	8.1	ND(0.10)	ND(0.20)	0.4	ND(0.20)Z		

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-27-BR	6/27/2003	NA	ND(0.0050)	0.008	0.009	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.027	ND(0.030)	ND(0.010)	1.8D	6.5D	ND(0.010)	ND(0.010)	1.0	ND(0.25)	
	12/18/2003	87	ND(0.20)Z	ND(0.20)Z	ND(0.20)Z	ND(0.20)Z	ND(0.20)Z	ND(0.20)Z	ND(0.40)Z	ND(1.0)Z	3.8	15	ND(0.20)Z	ND(0.40)Z	5.0	ND(0.20)		
	4/27/2004	86	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.50)	ND(1.3)	5.8	18	ND(0.25)	ND(0.50)	5.5	ND(0.0010)	
	7/12/2004	85.5	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	0.3	ND(0.40)	ND(1.0)	4.2	17	ND(0.20)	ND(0.40)	5.6	ND(0.010)	
	12/28/2004	87	0.0082	0.043	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0011	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	87	ND(0.010)	0.094	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.82	0.19	ND(0.010)	ND(0.020)	0.029	ND(0.10)	
	1/3/2006	87	ND(0.0010)	0.041	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/28/2006	86	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	3.2	9.1N	ND(0.10)	ND(0.20)	3.2	ND(0.0010)	
	1/31/2007	87	ND(0.0010)	0.028	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.10)	
	4/14/2007	87	ND(0.0010)	0.034	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.10)	
	11/15/2007	86	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	5.5	9.4	ND(0.10)	ND(0.20)	3.0	ND(0.20)	
	4/28/2008	86	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	5.6	13	ND(0.10)	ND(0.20)	4.4	ND(0.20)	
	10/22/2008	86	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	7.0	15	ND(0.20)	ND(0.40)	3.8	ND(0.20)	
	4/3/2009	86	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	10	26	ND(0.20)	ND(0.20)	7.7	ND(0.0025)	
	10/27/2009	78.5	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	10	24	ND(0.20)	ND(0.20)	7.6	ND(0.0020)	
	4/22/2010	86	ND(0.0025)	0.028	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.19	0.048	ND(0.0025)	ND(0.0025)	0.005	ND(0.0020)	
	10/14/2010	86	ND(0.0020)	0.045	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/14/2011	81	ND(0.0020)	0.017	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0056	ND(0.0020)	ND(0.0020)	0.0026	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.012	
10/28/2011	86	ND(0.0050)	0.036	0.05	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	7.4D	22D	ND(0.0050)	0.03	4.9D	ND(0.0010)Z		
4/6/2012	85	ND(0.0020)	0.033	0.054	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	3.2D	20D	ND(0.0020)	0.026	4.7D	0.028		
OB-27-DO	6/30/2003	NA	ND(0.0020)	0.004	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.012	ND(0.010)	ND(0.010)	ND(0.0020)	0.007	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/18/2003	63	ND(0.0010)Z	0.0044	0.0085	ND(0.0010)Z	ND(0.0010)Z	ND(0.0020)Z	ND(0.0010)Z	ND(0.0050)Z	ND(0.0010)Z	0.0041	ND(0.0010)Z	ND(0.0020)Z	ND(0.0010)Z	ND(0.0010)Z	ND(0.0010)	
	4/27/2004	61	ND(0.0010)	0.005	0.01	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0047	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	7/12/2004	61	ND(0.0010)	0.0038	0.0075	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0048	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	12/28/2004	61	ND(0.0010)	0.0031	0.0065	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0035	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	61	ND(0.0010)	0.0036	0.0072	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0042	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/3/2006	63	ND(0.0010)	0.0021	0.0042	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0043	ND(0.0010)	ND(0.0020)	0.001	ND(0.0010)	
	3/28/2006	61	ND(0.0010)	0.0018	0.0035	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/31/2007	63	ND(0.0010)	0.0018	0.0039	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/10/2007	63	ND(0.0010)	0.0017	0.0034	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0026	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	11/15/2007	60	ND(0.0010)	0.0015	0.0033	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0033	ND(0.0010)	ND(0.0020)	0.0015	ND(0.0010)	
	4/23/2008	61	ND(0.0010)	0.0018	0.0038	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0032	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	10/22/2008	61	ND(0.0010)	0.0013	0.0029	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0034	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.10)	
4/3/2009	61	ND(0.0010)	0.0013	0.0029	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0028	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)		
OB-28-BR	6/18/2003	NA	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	0.8	24	ND(0.20)	ND(0.20)	0.4	ND(0.0010)	
	12/17/2003	92	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/26/2004	92	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	94	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0045	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.025)	
	3/31/2006	93	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/11/2007	90	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	ND(0.025)	2.2	ND(0.025)	ND(0.050)	0.2	ND(0.0010)	
	4/6/2009	93	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.024	ND(0.0010)	ND(0.0010)	0.0011	ND(1.0)	
	4/20/2010	93	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	
	5/27/2011	122	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
4/5/2012	89	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
OB-28-DO	7/2/2003	NA	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(5.0)	ND(2.0)	4.0	51	ND(2.0)	ND(2.0)	ND(1.0)	ND(0.0010)	
	12/17/2003	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0018	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/26/2004	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-28-DO (Cont.)	4/28/2005	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.028	
	3/31/2006	61	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	
	4/14/2007	65	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.081	ND(0.0010)	0.0076	0.029	ND(0.010)	
OB-29-DO	8/13/2003	NA	0.004	0.011	0.015	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.12	0.48	ND(0.0040)	ND(0.0040)	0.11	ND(0.0050)	
	12/29/2003	40	ND(0.010)	ND(0.010)	0.013	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.24	0.72	ND(0.010)	ND(0.020)	0.15	ND(0.0050)	
	5/3/2004	35	ND(0.0050)	0.0081	0.011	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.2	0.64	ND(0.0050)	ND(0.010)	0.16	ND(0.0050)	
	12/30/2004	37	ND(0.0050)	0.0066	0.0078	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.16	0.5	ND(0.0050)	ND(0.010)	0.13	ND(0.0050)	
	4/29/2005	35	ND(0.0050)	0.007	0.0064	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.19	0.54N	ND(0.0050)	ND(0.010)	0.16	0.18	
	3/29/2006	30	ND(0.0050)	0.0054	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.074	0.28	ND(0.0050)	ND(0.010)	0.36	ND(0.0020)	
OB-30-DO	2/2/2004	69	ND(0.0050)	0.16	0.18	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0054	0.19	ND(0.0050)	ND(0.0020)	0.034	ND(0.0020)	
	5/5/2004	69	0.0058	0.24	0.28	0.0037	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0038	0.21	ND(0.0020)	ND(0.0040)	0.0071	ND(0.0020)	
	12/29/2004	68	0.003	0.14	0.14	0.0022	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0031	0.14	ND(0.0020)	ND(0.0040)	0.0036	ND(0.0020)	
	4/28/2005	69	0.012	0.21	0.23	0.0034	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0046	0.21	ND(0.0020)	ND(0.0040)	0.007	ND(0.0020)	
	1/3/2006	69	0.0026	0.13	0.16	0.002	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.004	0.16	ND(0.0020)	ND(0.0040)	0.0057	ND(0.0020)	
	3/28/2006	69	0.004	0.12	0.14	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0026	0.15	ND(0.0020)	ND(0.0040)	0.005	ND(0.0020)	
	1/31/2007	69	ND(0.0020)	0.11	0.14	0.002	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0032	0.14	ND(0.0020)	ND(0.0040)	0.0062	ND(0.0010)	
	4/11/2007	69	ND(0.0020)	0.15	0.19	0.0025	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0035	0.16	ND(0.0020)	ND(0.0040)	0.0072	ND(0.0020)	
	11/15/2007	67	ND(0.0010)	0.1	0.14	0.002	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0033	0.13	ND(0.0010)	ND(0.0020)	0.0088	ND(0.0020)	
	4/23/2008	68	ND(0.0020)	0.16	0.18	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0032	0.16	ND(0.0020)	ND(0.0040)	0.0093	ND(0.0020)	
	10/21/2008	68	0.0032	0.16	0.19	0.0024	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0046	0.16	ND(0.0020)	ND(0.0040)	0.0088	ND(0.0050)	
	4/6/2009	68	ND(0.0020)	0.18	0.18	0.0025	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0025	0.18	ND(0.0020)	ND(0.0020)	0.0089	ND(0.0010)	
	OB-31-DO	2/2/2004	64	ND(0.0050)	0.005	ND(0.0010)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0020)	ND(0.0050)	ND(10)
		5/2/2004	64	ND(0.0010)	0.0053	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0053	ND(0.0010)	ND(0.0020)	0.0019	ND(10)
OB-32-DO	2/2/2004	61	ND(10)	ND(10)	ND(2.0)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	76	850D	ND(10)	ND(4.0)	ND(10)	ND(0.010)	
	5/5/2004	58	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(20)	ND(10)	ND(20)	ND(50)	68	710	ND(10)	ND(20)	ND(10)	ND(0.0050)J	
	12/29/2004	58	0.059	ND(0.010)	ND(0.010)	0.019	0.056	ND(0.020)	0.81	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0050)	
	5/2/2005	61	0.34J	ND(0.0050)J	ND(0.0050)J	0.0084J	0.24J	ND(0.010)J	0.63J	ND(0.010)J	ND(0.025)J	0.0058J	ND(0.0050)J	ND(0.0050)J	ND(0.010)J	ND(0.0050)J	ND(0.0025)	
	1/3/2006	61	0.45	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.32	ND(0.010)	0.38	ND(0.010)	ND(0.025)	0.016	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	
	4/3/2006	54	0.29	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.17	ND(0.0050)	0.29	ND(0.0050)	ND(0.013)	0.0048	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	
	1/31/2007	61	1.2	ND(0.010)	ND(0.010)	ND(0.010)	0.91	ND(0.020)	1.3	ND(0.020)	ND(0.050)	0.03	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.010)	
	4/11/2007	61	0.6	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.55	ND(0.010)	0.35	ND(0.010)	ND(0.025)	0.005	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	
	11/15/2007	60	1.3	ND(0.010)	ND(0.010)	ND(0.010)	1.3	ND(0.020)	1.0	ND(0.020)	ND(0.050)	0.011	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0020)	
	4/25/2008	60	1	ND(0.010)	ND(0.010)	ND(0.010)	0.88	ND(0.020)	0.57	ND(0.020)	ND(0.050)	0.014	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.010)	
	10/22/2008	60	2.1D	0.0026	ND(0.0020)	ND(0.0020)	1.7D	ND(0.0040)	0.87D	ND(0.0040)	ND(0.010)	0.093	0.0075	0.002	ND(0.0040)	ND(0.0020)	ND(0.010)	
	4/3/2009	60	2.4	ND(0.020)	ND(0.020)	ND(0.020)	2.0	ND(0.020)	0.85	ND(0.020)	ND(0.020)	0.16	0.03	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	
	10/27/2009	60	1.5	ND(0.010)	ND(0.010)	ND(0.010)	1.4	ND(0.010)	0.53	ND(0.010)	ND(0.010)	0.059	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	
	11/23/2009	60	2	ND(0.020)	ND(0.020)	ND(0.020)	1.7	ND(0.020)	0.51	ND(0.020)	ND(0.020)	0.3	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	
	4/20/2010	60	1.5	ND(0.010)	ND(0.010)	ND(0.010)	1.3	ND(0.010)	0.36	ND(0.010)	ND(0.010)	0.046	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(10)	
	10/14/2010	60	1.4D	ND(0.0020)	ND(0.0020)	ND(0.0020)	1.2D	ND(0.0020)	0.28D	ND(0.0020)	0.0025	0.0021	ND(0.0020)	0.004	ND(0.0020)	ND(0.0020)	ND(0.0040)	
	4/14/2011	52	0.57D	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.50D	ND(0.0040)	0.1	ND(0.0040)	ND(0.0040)	0.079	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0050)	
	10/28/2011	60	0.43	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.45	ND(0.0050)	0.079	ND(0.0050)	ND(0.0050)	0.0068	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	
	4/5/2012	48	0.19	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.19	ND(0.0020)	0.041	ND(0.0020)	ND(0.0020)	0.042	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	OB-32-DO(PURGE)	2/2/2004	NA	ND(10)	ND(10)	ND(2.0)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	36	580D	ND(10)	ND(4.0)	ND(10)	ND(0.0010)
OB-33-DO	2/2/2004	56	ND(0.0050)	ND(0.0050)	ND(0.0010)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0064	ND(0.0050)	ND(0.0050)	0.054	0.99D	ND(0.0050)	ND(0.0020)	ND(0.0050)	ND(0.0010)	
	5/5/2004	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.022	0.072	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	12/29/2004	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/28/2005	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	



**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)
OB-33-DO (Cont.)	12/29/2005	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/28/2006	54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	1/31/2007	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0015	ND(0.0010)
	4/14/2007	56	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	11/13/2007	54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/21/2008	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	10/21/2008	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.050)
	4/6/2009	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
OB-34-DO	2/2/2004	64	ND(0.050)	ND(0.050)	ND(0.010)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.22	6.5D	ND(0.050)	ND(0.020)	ND(0.050)	ND(0.0050)
	5/5/2004	64	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	0.29	13N	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.25)J
	12/29/2004	63	0.0069	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.03	ND(0.010)	0.043	ND(0.010)	ND(0.025)	0.49	0.013	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0010)
	5/2/2005	64	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.050)J	ND(0.025)J	ND(0.050)J	ND(0.13)J	1.4J	3.5J	ND(0.025)J	ND(0.050)J	0.093J	ND(0.0020)
	1/3/2006	64	0.017	0.0038	ND(0.0010)	ND(0.0010)	0.12	ND(0.0020)	0.1	ND(0.0020)	ND(0.0050)	0.058	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.20)
	3/28/2006	62	0.0098	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.045	ND(0.0040)	0.069	ND(0.0040)	ND(0.010)	0.14	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.20)
	1/31/2007	64	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	2.7	18	ND(0.20)	ND(0.40)	0.74	ND(0.0010)
	4/14/2007	64	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	2.8	17	ND(0.20)	ND(0.40)	0.81	ND(0.010)
	11/15/2007	63	0.0048	0.0031	ND(0.0010)	ND(0.0010)	0.017	ND(0.0020)	0.047	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)
	4/25/2008	63	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	0.025	ND(0.020)	ND(0.050)	0.75	0.062	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0010)
	10/22/2008	63	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	0.023	ND(0.0040)	ND(0.010)	0.86D	2.4D	ND(0.0020)	ND(0.0040)	0.2	ND(0.10)
	4/6/2009	63	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0027	ND(0.0010)	ND(0.0010)	0.059	0.0022	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.10)
	10/27/2009	62	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	1.6	8.6	ND(0.10)	ND(0.10)	0.65	ND(0.0050)
	4/20/2010	63	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	1.6	10	ND(0.10)	ND(0.10)	1.1	ND(0.25)
	10/14/2010	63	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0093	ND(0.0050)	ND(0.0050)	0.3	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)
	4/14/2011	61	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.9	0.37	ND(0.010)	ND(0.010)	0.011	ND(0.0050)
	10/28/2011	63	ND(0.0050)	ND(0.0050)	0.006	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0058	ND(0.0050)	ND(0.0050)	1.3D	11D	ND(0.0050)	ND(0.0050)	0.95D	ND(2.0)
	4/5/2012	62	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	1.2	8.5	ND(0.10)	ND(0.10)	0.77	ND(0.10)
OB-35-DO	2/2/2004	62	ND(2.5)	ND(2.5)	ND(0.50)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	77	ND(2.5)	ND(1.0)	ND(2.5)	ND(2.5)
	5/4/2004	62	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(2.0)	ND(4.0)	ND(2.0)	ND(4.0)	ND(10)	3.0	170	ND(2.0)	ND(4.0)	ND(2.0)	ND(5.0)
	12/28/2004	61	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(2.5)	ND(5.0)	ND(2.5)	ND(5.0)	ND(13)	9.8	330	ND(2.5)	ND(5.0)	ND(2.5)	ND(0.20)
	5/3/2005	61	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(5.0)	ND(10)	ND(5.0)	ND(10)	ND(25)	11	440	ND(5.0)	ND(10)	ND(5.0)	ND(0.20)
	1/3/2006	63	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.8	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.20)
	4/7/2006	59	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	23	18	ND(0.20)	ND(0.40)	1.9	ND(0.050)
	2/5/2007	63	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)	ND(0.20)	ND(0.40)	ND(1.0)	14	6.4	ND(0.20)	ND(0.40)	0.77	ND(0.0010)
	4/13/2007	63	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	5.7	0.088	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.25)
	11/15/2007	62	ND(0.0010)	0.025	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.01	ND(0.0010)	0.0021	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/25/2008	62	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.50)	ND(0.25)	ND(0.50)	ND(1.3)	20	8.2	ND(0.25)	ND(0.50)	1.9	ND(0.20)
	10/23/2008	62	ND(0.0010)	0.021	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	0.0022	ND(0.0020)	ND(0.0010)	ND(0.20)
	4/9/2009	57	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	19	6.2	ND(0.20)	ND(0.20)	1.7	ND(0.20)
	10/28/2009	57	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	22	6.9	ND(0.20)	ND(0.20)	1.6	ND(0.40)
	4/22/2010	62	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	22	7.5	ND(0.20)	ND(0.20)	1.6	ND(1.0)
	10/14/2010	49	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	34	7.7	ND(0.40)	ND(0.40)	1.6	ND(0.50)J
	4/7/2011	48.7	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	ND(0.50)J	32J	7.7J	ND(0.50)J	ND(0.50)J	1.6J	ND(0.40)
	10/27/2011	62	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	29	5.0	ND(0.40)	ND(0.40)	0.95	ND(0.25)
	4/6/2012	48	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	19	5.4	ND(0.20)	ND(0.20)	0.79	ND(0.20)
OB-35-DO(PURGE)	2/2/2004	NA	ND(1.0)	ND(1.0)	ND(0.20)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	1.9	68D	ND(1.0)	ND(0.40)	ND(1.0)	ND(0.10)
OB-36-DO	2/2/2004	62	ND(0.25)	ND(0.25)	ND(0.050)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	11D	8.8	ND(0.25)	ND(0.10)	ND(0.25)	ND(0.020)
	5/4/2004	59	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	8.2	7.2	ND(0.10)	ND(0.20)	ND(0.10)	ND(1.0)
	12/28/2004	60	0.048	ND(0.020)	ND(0.020)	0.037	1.4	ND(0.040)	1.4	ND(0.040)	ND(0.10)	0.022	0.028	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.0010)

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)
OB-36-DO (Cont.)	5/3/2005	59	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	34	110	ND(1.0)	ND(2.0)	ND(1.0)	ND(0.0010)
	1/3/2006	62	0.0027	ND(0.0010)	ND(0.0010)	0.0026	0.01	ND(0.0020)	0.014	ND(0.0020)	ND(0.0050)	0.0023	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.025)
	4/7/2006	59	0.0095	0.0051	ND(0.0010)	0.012	0.058	ND(0.0020)	0.13	ND(0.0020)	ND(0.0050)	0.0057	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0025)
	2/5/2007	62	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	0.032	ND(0.050)	0.14	ND(0.050)	ND(0.13)	2.4	0.038	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.50)
	4/13/2007	62	0.017	0.017	ND(0.0025)	0.025	0.079	ND(0.0050)	0.3	ND(0.0050)	ND(0.013)	0.1	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.50)
	11/15/2007	57	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	22	46	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)
	1/25/2008	64	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	14	62	ND(0.50)	ND(1.0)	ND(0.50)	ND(0.10)J
	4/25/2008	61	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	3.2	7.9	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.050)
	7/29/2008	62	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.10)J	ND(0.20)J	ND(0.10)J	ND(0.20)J	ND(0.50)J	4.0J	8.3J	ND(0.10)J	ND(0.20)J	ND(0.10)J	ND(0.10)
	10/22/2008	61	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	3.2	6.1	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.050)
	1/14/2009	62	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	4.0	8.2	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.25)
	4/9/2009	54	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	3.9	6.3	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)
	10/26/2009	55	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	7.9	29	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.20)
	4/22/2010	61	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	4.4	5.8	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.25)
	10/13/2010	54	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	6.4	15	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)J
	4/7/2011	53.9	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	ND(0.20)J	7J	9.8J	ND(0.20)J	ND(0.20)J	0.24J	ND(0.10)
	10/28/2011	61	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	6.6	5.2	ND(0.10)	ND(0.10)	ND(0.10)	ND(1.0)
	4/6/2012	41	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	12D	10	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)
	OB-36-DO(PURGE)	2/2/2004	NA	ND(0.25)	ND(0.25)	ND(0.050)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	ND(0.25)	9.6	9.3	ND(0.25)	ND(0.10)	ND(0.25)
OB-37-DO	2/2/2004	60	ND(10)	ND(10)	ND(2.0)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	ND(10)	110	220	ND(10)	ND(4.0)	ND(10)	ND(0.10)
	5/4/2004	60	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.10)	ND(0.25)	3.2	5.3	ND(0.050)	ND(0.10)	ND(0.050)	ND(0.50)
	12/28/2004	59	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.20)	ND(0.10)	ND(0.20)	ND(0.50)	9.0	7.6	ND(0.10)	ND(0.20)	ND(0.10)	ND(1.0)
	5/3/2005	58	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)	ND(2.5)	30	58	ND(0.50)	ND(1.0)	ND(0.50)	ND(1.0)
	1/3/2006	62	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	36	100	ND(1.0)	ND(2.0)	ND(1.0)	ND(0.0010)
	4/7/2006	59	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(1.0)	ND(2.0)	ND(1.0)	ND(2.0)	ND(5.0)	53	140	ND(1.0)	ND(2.0)	ND(1.0)	ND(0.0010)
	2/5/2007	62	0.0041	0.0019	ND(0.0010)	ND(0.0010)	0.077	ND(0.0020)	0.046	ND(0.0020)	ND(0.0050)	0.1	0.0015	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)
	4/13/2007	62	0.0021	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.066	ND(0.0020)	0.03	ND(0.0020)	ND(0.0050)	0.13	0.0072	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0025)
	11/15/2007	61	0.15	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.39	ND(0.010)	0.21	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)J
	4/25/2008	61	0.011	0.0031	ND(0.0025)	ND(0.0025)	0.35	ND(0.0050)	0.32D	ND(0.0050)	ND(0.013)	0.0027	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0010)
	7/29/2008	61	0.0058J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	0.32J	ND(0.010)J	0.43J	ND(0.010)J	ND(0.025)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.010)J	ND(0.0050)J	ND(0.20)
	10/22/2008	61	0.0056	0.0018	ND(0.0010)	ND(0.0010)	0.12	ND(0.0020)	0.11	ND(0.0020)	ND(0.0050)	0.041D	0.037D	ND(0.0010)	ND(0.0020)	0.0021	ND(0.20)
	1/30/2009	61	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	0.79	17	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.40)
	4/9/2009	61	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	2.4	23	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.10)
	10/26/2009	49	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.40)	2.3	43	ND(0.40)	ND(0.40)	ND(0.40)	ND(0.0050)J
	4/22/2010	61	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	0.36J	0.98J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.0010)J
	10/13/2010	61	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.007	ND(0.0050)	0.019	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0020)
	4/7/2011	35	0.0031	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0093	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/28/2011	61	0.0084	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0033	ND(0.0020)	0.007	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	4/6/2012	46	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	0.0028J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J
OB-38-DO	7/23/2004	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	0.0048J	0.061J	ND(0.0010)J	ND(0.0020)J	0.0036J	ND(0.020)
	12/28/2004	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0037	0.003	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.020)
	4/27/2005	50	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.9	0.85	ND(0.020)	ND(0.040)	0.11	ND(0.020)
	1/3/2006	55	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	2.3	1.1	ND(0.020)	ND(0.040)	0.16	ND(0.020)
	3/28/2006	50	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	2.3	1.1	ND(0.020)	ND(0.040)	0.17	ND(0.0010)
	1/31/2007	49	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	2	1.1	ND(0.020)	ND(0.040)	0.18	ND(0.020)
	4/10/2007	55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.014	ND(0.0010)	ND(0.0020)	0.0058	ND(0.020)
	11/16/2007	47	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.8	0.79	ND(0.020)	ND(0.040)	0.17	ND(0.025)

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
OB-38-DO (Cont.)	4/25/2008	54	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	1.7	0.95	ND(0.020)	ND(0.040)	0.2	ND(0.010)	
	10/22/2008	54	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.050)	ND(0.025)	ND(0.050)	ND(0.13)	2.1	1.3	ND(0.025)	ND(0.050)	0.18	ND(0.010)	
	4/9/2009	47	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.74	0.55	ND(0.010)	ND(0.010)	0.13	ND(0.0025)	
	10/28/2009	47	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.25	0.36	ND(0.010)	ND(0.010)	1.1	ND(0.0050)	
	4/21/2010	54	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.25	0.27	ND(0.0025)	ND(0.0025)	0.056	ND(0.0010)	
	10/14/2010	45.5	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.43	0.32	ND(0.0050)	0.0064	0.34	ND(0.0040)	
	4/5/2011	45	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.27	0.22	ND(0.0040)	ND(0.0040)	0.037	0.0057	
	10/26/2011	45	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.52D	0.39	ND(0.0050)	0.0052	0.28	ND(0.0010)	
	4/6/2012	44.5	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.47	0.46	ND(0.0050)	ND(0.0050)	0.15	0.0067	
	OB-39-DO	7/26/2004	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	0.0046J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)J
12/28/2004		54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0018	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/27/2005		54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0073	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
1/6/2006		55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
3/28/2006		54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.013	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
1/31/2007		55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.011	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
4/10/2007		55	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.008	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
11/14/2007		53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.011	ND(0.0010)	ND(0.0020)	0.0012	ND(0.0010)	
4/25/2008		54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0083	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
10/22/2008		54	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0091	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J	
4/9/2009		53	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0076	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
OB-40-DO		7/23/2004	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J
	12/28/2004	69	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/27/2005	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	12/29/2005	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/28/2006	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	1/31/2007	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/10/2007	69	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	11/14/2007	66	ND(0.0010)	0.0045	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0014	0.0038	ND(0.0010)	ND(0.0020)	0.0027	ND(0.0010)	
	4/25/2008	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	10/22/2008	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J	
	4/9/2009	68	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
	OB-41-S	4/5/2011	13	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.05	0.26	ND(0.0040)	ND(0.0040)	0.081	ND(0.0020)
		10/25/2011	13	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.03	0.12	ND(0.0020)	ND(0.0020)	0.04	ND(0.0040)
4/5/2012		13.2	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.017	0.069	ND(0.0020)	ND(0.0020)	0.028	ND(0.0020)	
OB-42-S	4/5/2011	13	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.1	2.7	ND(0.040)	ND(0.040)	1.2	ND(0.050)	
	10/24/2011	13	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	0.096	3.0	ND(0.050)	ND(0.050)	1.0	ND(0.0020)	
	4/4/2012	13.5	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	ND(0.040)	0.078	2.4	ND(0.040)	ND(0.040)	0.94	ND(0.040)	
OB-43-S	10/24/2011	16	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0052	0.007	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	4/4/2012	15	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
P-05R	4/27/2009	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)	
P-09R	1/6/2006	5.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0048	ND(0.0010)	
	3/30/2006	5.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.035	0.16	ND(0.0010)	
	2/1/2007	5.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.028	0.065	0.0068	
	4/12/2007	4.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.003	0.05	ND(0.0010)	
	11/14/2007	NA	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	0.074	0.35	ND(0.0010)	
	2/11/2008	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.014	ND(0.0010)	
4/23/2008	4	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.015	0.047	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
P-09R (Cont.)	10/23/2008	4.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.017	0.071	ND(0.0010)
	4/6/2009	4.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.016	ND(0.0010)
	10/27/2009	4.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
	4/23/2010	4.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0036	ND(0.0010)J
	10/13/2010	4.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/6/2011	3.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0021
P-11R	10/24/2011	4.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	4/27/2009	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)
	4/22/2010	9	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)
P-14	4/5/2011	8	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	4/5/2012	8.5	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	6/3/2002	12	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
P-19A	1/29/2003	12	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	5/3/2004	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)J
	1/3/2005	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	0.02	ND(0.0040)	ND(0.010)	0.004	0.02	ND(0.0020)	ND(0.0040)	0.25	ND(0.0010)	
P-19A	5/2/2005	10	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0020)J	ND(0.0040)J	0.016J	ND(0.0040)J	ND(0.010)J	0.0023J	0.013J	ND(0.0020)J	ND(0.0040)J	0.18J	0.001	
	1/6/2006	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0098	ND(0.0020)	ND(0.0050)	0.0013	0.007	ND(0.0010)	ND(0.0020)	0.082	ND(0.0020)	
	3/30/2006	9	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.01	ND(0.0020)	ND(0.0050)	0.0021	0.0096	ND(0.0010)	ND(0.0020)	0.14	ND(0.0020)	
	2/1/2007	11	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	0.0038	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0095	ND(0.0020)	ND(0.0040)	0.16	ND(0.0050)	
	4/12/2007	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	0.0053	ND(0.0040)	ND(0.010)	0.0022	0.014	ND(0.0020)	ND(0.0040)	0.22	ND(0.0020)	
	11/14/2007	NA	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0071	0.038	ND(0.0050)	ND(0.010)	0.44	ND(0.0050)	
	4/23/2008	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.0024	0.016	ND(0.0020)	ND(0.0040)	0.23	ND(0.0020)	
	10/23/2008	10	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	0.03	ND(0.0050)	ND(0.010)	0.41	ND(0.0020)	
	4/6/2009	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0037	0.025	ND(0.0020)	ND(0.0020)	0.28	ND(0.0010)	
	10/27/2009	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0067	0.031	ND(0.0020)	ND(0.0020)	0.28	ND(0.0020)	
	4/22/2010	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0019	ND(0.0010)	ND(0.0010)	0.033	ND(0.0010)	
	10/13/2010	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0065	0.037	ND(0.0020)	ND(0.0020)	0.47D	ND(0.0020)	
	4/6/2011	9	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0031	0.012	ND(0.0020)	ND(0.0020)	0.12	ND(0.0040)	
	10/24/2011	10	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.0047	0.021	ND(0.0040)	ND(0.0040)	0.2	ND(0.0010)	
	4/6/2012	9.4	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.0054	0.03	ND(0.0040)	ND(0.0040)	0.29	ND(0.0040)	
P-20R	1/6/2006	12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0011	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/30/2006	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0053	0.021	ND(0.0010)	ND(0.0020)	0.0053	ND(0.0010)	
	2/1/2007	12	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.026	0.11	ND(0.0010)	ND(0.0020)	0.03	ND(0.0010)
	4/12/2007	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0053	0.044	ND(0.0010)	ND(0.0020)	0.026	ND(0.0010)	
	4/23/2008	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.013	0.083N	ND(0.0010)	ND(0.0020)	0.024	ND(0.0010)	
	4/6/2009	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0024	0.014	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0010)	
	4/22/2010	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)
	4/6/2011	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)J
	4/6/2012	10	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	P-21	1/3/2005	10	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0019	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0025	ND(0.0010)	ND(0.0020)	0.01	ND(0.0010)
5/2/2005		10	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
1/4/2006		12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
4/7/2006		12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0024	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0036	ND(0.0010)	ND(0.0020)	0.012	ND(0.0010)
2/1/2007		12	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.004	ND(0.0010)	ND(0.0020)	0.0059	ND(0.0010)
4/12/2007	11	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)J	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)
P-24	1/3/2005	5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0043	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	5/2/2005	4	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	0.0020J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0020)J	ND(0.0010)J
	1/6/2006	8	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/30/2006	2.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	2/5/2007	8	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/12/2007	3.5	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.10)
	4/23/2008	3	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.012	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.10)
RW-01_MW-18	6/3/2002	10	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	37D	25	ND(0.20)	ND(0.20)	1.1	ND(0.0020)
	6/3/2002	45	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	39D	27	ND(0.20)	ND(0.20)	1.1	ND(0.010)
	2/17/2003	45	0.026	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.11	ND(0.0020)	0.003	ND(0.010)	ND(0.010)	0.32D	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)
	5/13/2003	45	0.23	ND(0.010)	ND(0.010)	ND(0.010)	3.2D	ND(0.010)	0.13	ND(0.050)	ND(0.020)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.020)	ND(0.010)	ND(0.0050)
	12/16/2003	45	0.16	ND(0.010)	ND(0.010)	ND(0.010)	1.1	ND(0.020)	0.056	ND(0.020)	ND(0.050)	0.014	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0020)J
	5/13/2004	41	0.022	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.013	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.010)	ND(0.0050)	ND(0.0020)
	5/2/2005	45	0.14J	0.0035J	ND(0.0020)J	0.0033J	0.24J	ND(0.0040)J	0.061J	ND(0.010)J	ND(0.010)J	0.010J	ND(0.0020)J	ND(0.0020)J	ND(0.0040)J	ND(0.0020)J	ND(0.0025)
	4/3/2006	37	0.26	0.0077	ND(0.0020)	0.0053	0.14	ND(0.0040)	0.097	ND(0.0040)	ND(0.010)	0.0058	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.010)
	4/12/2007	45	0.3	0.0077	ND(0.0025)	0.0046	0.089	ND(0.0050)	0.1	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0020)
	4/12/2007	70	1.3	ND(0.010)	ND(0.010)	ND(0.010)	0.96	ND(0.020)	0.25	ND(0.020)	ND(0.050)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.0025)
	4/25/2008	44	0.19	0.011	ND(0.0020)	ND(0.0020)	0.045	ND(0.0040)	0.15	ND(0.0040)	ND(0.010)	0.0071	0.014	ND(0.0020)	ND(0.0040)	0.0053	ND(0.10)
	4/9/2009	39	0.32	0.017	ND(0.0025)	ND(0.0025)	0.027	ND(0.0025)	0.21	ND(0.0025)	ND(0.0025)	0.051	0.1	ND(0.0025)	ND(0.0025)	0.12	ND(0.20)
RW-02	6/3/2002	40	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	25	8.1	ND(0.20)	ND(0.20)	ND(0.10)	ND(0.0020)
	6/3/2002	70	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	0.3	ND(1.0)	ND(0.40)	9.1	36	ND(0.40)	ND(0.40)	ND(0.20)	ND(0.0050)
	2/17/2003	70	0.15	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.80D	ND(0.0020)	0.14	ND(0.010)	ND(0.010)	0.052	0.006	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0050)
	5/14/2003	70	0.088	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.83	ND(0.0050)	0.091	ND(0.030)	ND(0.010)	0.01	ND(0.0050)	ND(0.010)	ND(0.010)	ND(0.0050)	ND(0.0050)
	12/16/2003	70	0.16	ND(0.0050)	ND(0.0050)N	ND(0.0050)	0.32	ND(0.010)	0.099	ND(0.010)	ND(0.025)	0.013	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0050)
	5/2/2004	64	0.3	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.54	ND(0.010)	0.17	ND(0.010)	ND(0.025)	0.014	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)
	3/31/2006	66	0.63	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.48	ND(0.010)	0.23	ND(0.010)	ND(0.025)	0.036	0.0059	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)
RW-03	6/3/2002	20	0.04	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	1.7	5.0D	ND(0.020)	ND(0.020)	0.15	ND(0.010)
	6/3/2002	40	0.04	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	1.7	5.0D	ND(0.020)	ND(0.020)	0.15	ND(0.010)
	6/3/2002	70	0.05	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	3.0D	5.0D	ND(0.020)	ND(0.020)	0.29	ND(0.010)
	2/20/2003	70	3.1D	ND(0.010)	ND(0.010)	ND(0.010)	0.04	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.020)	ND(0.010)	ND(0.0050)
	5/13/2003	70	2.6	ND(0.010)	ND(0.010)	ND(0.010)	0.19	ND(0.010)	0.06	ND(0.050)	ND(0.020)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.020)	ND(0.010)	ND(0.0025)
	12/16/2003	70	0.52	0.0054	ND(0.0050)	ND(0.0050)	0.024	ND(0.010)	0.0074	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.020)J	
	5/2/2004	62	0.2	0.0055	ND(0.0025)	ND(0.0025)	0.036	ND(0.0050)	0.0089	ND(0.0050)	ND(0.013)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.020)
	5/2/2005	70	1.7J	0.047J	ND(0.020)J	ND(0.020)J	0.11J	ND(0.040)J	0.033J	ND(0.040)J	ND(0.10)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.040)J	ND(0.020)J	ND(0.0010)
	4/3/2006	56	1.9	0.08	ND(0.020)	ND(0.020)	0.095	ND(0.040)	0.024	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.025)
	4/12/2007	70	0.033	0.0011	ND(0.0010)	ND(0.0010)	0.0015	ND(0.0020)	0.0015	ND(0.0020)	ND(0.0050)	0.021	0.012	ND(0.0010)	ND(0.0020)	0.0053	ND(0.010)
	7/14/2009	70	0.047	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	0.32	0.34	ND(0.025)	2.6	2.4	ND(0.0050)
	7/14/2009	15	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	0.26	0.14	ND(0.010)	0.56	0.85	ND(0.0050)
	10/26/2009	15	0.068	0.0071	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.052	0.025	ND(0.0050)	0.67D	0.058	ND(0.0020)
	10/26/2009	56	0.036	0.0069	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.055	0.093	ND(0.0050)	0.62	0.14	ND(0.0020)
	1/28/2010	55	0.014	0.0028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.028	0.035	ND(0.0020)	0.14	0.2	ND(0.020)
	1/28/2010	15	0.01	0.0026	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.02	0.016	ND(0.0020)	0.14	0.19	ND(0.025)
	4/22/2010	55	0.022	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.46	0.6	ND(0.020)	0.36	2.2	ND(0.025)J
	4/28/2010	15	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	ND(0.025)	0.92	0.84	ND(0.025)	0.56	3.5	ND(0.10)
	7/14/2010	69	0.032J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	ND(0.025)J	0.62J	1.1J	ND(0.025)J	3.2J	3.7J	ND(0.020)
	10/12/2010	55	0.78	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	0.59	1.1	ND(0.10)	5.2	5.4	ND(0.010)
1/4/2011	55	0.29	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	0.098	0.2	ND(0.020)	0.51	1.1	ND(0.0020)	
4/5/2011	54.7	0.01	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.079	0.15	ND(0.0020)	0.0022	0.11	ND(0.10)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohier Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
RW-04	6/3/2002	20	0.57	0.04	0.03	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.46	0.98	ND(0.020)	ND(0.020)	0.14	ND(0.10)	
	6/3/2002	40	3.8	0.3	0.3	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	1.9	8.6	ND(0.20)	ND(0.20)	1.1	ND(0.0020)	
	6/3/2002	70	5.7	0.4	0.4	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	3.2	22	ND(0.20)	ND(0.20)	2.1	ND(0.0020)	
	1/29/2003	70	0.027	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.022	ND(0.0020)	0.005	ND(0.010)	ND(0.010)	0.12	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	5/13/2003	70	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.015	0.004	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/15/2003	70	0.011	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.02	ND(0.0020)	0.0019	ND(0.0020)	ND(0.0020)	0.0019	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/27/2004	63	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.001	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	0.007	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	4/29/2005	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/31/2006	57	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0050)	0.0053	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)
4/12/2007	70	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.05	
RW-05	6/3/2002	15	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.003	0.004	ND(0.0020)	ND(0.0020)	0.0060D	ND(0.0020)	
	6/3/2002	35	0.11	0.6	0.28	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.27	2.0D	ND(0.020)	0.48	6.3D	ND(0.0020)	
	1/29/2003	35	0.039	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	5/13/2003	35	2.9D	0.02	0.028	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.021	0.11	ND(0.0020)	0.004	0.3	ND(0.0010)	
	12/15/2003	35	2.2	0.029	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.0020)	
	5/2/2004	34	0.0044	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0042	0.0028	ND(0.0010)	ND(0.0020)	0.0021	ND(0.0050)	
	4/27/2005	33	0.24	0.0082	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	ND(0.0020)	0.0028	ND(0.0020)	ND(0.0040)	0.0025	ND(0.0050)	
	4/3/2006	33	0.55	0.016	0.005	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.033	0.069	ND(0.0050)	ND(0.010)	0.06	ND(0.10)	
	4/12/2007	33	0.48	0.016	0.014	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.0084	0.038	ND(0.0050)	ND(0.010)	0.046	ND(0.10)	
RW-17_MW-17	6/3/2002	110	ND(0.10)	ND(0.10)	0.1	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	3.7	22D	ND(0.20)	0.3	7.9	ND(0.10)	
	6/3/2002	125	ND(0.10)	ND(0.10)	0.1	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	5.1	22D	ND(0.20)	0.3	7.7	ND(0.0020)	
	6/3/2002	160	ND(0.10)	ND(0.10)	0.1	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.10)	ND(0.50)	ND(0.20)	4.9	24D	ND(0.20)	0.3	7.4	ND(0.0020)	
	2/20/2003	160	0.013	ND(0.0020)	ND(0.0010)	ND(0.0020)	0.017	ND(0.0020)	0.004	ND(0.010)	ND(0.010)	0.036	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0050)	
	5/13/2003	160	0.002	0.002	ND(0.0010)	ND(0.0020)	0.012	ND(0.0020)	0.036	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	2/2/2004	160	ND(0.0050)	ND(0.0050)	ND(0.0010)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.016	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0020)	ND(0.0050)	ND(0.0010)	
	4/27/2004	160	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.027	ND(0.0010)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/29/2005	160	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.014	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	
	3/31/2006	56	0.0061	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0020)	0.012	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.3	
	4/12/2007	160	0.0028	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0089	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.3	
RW-19	6/3/2002	80	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(0.40)	8.5	37	ND(0.40)	ND(0.40)	12	0.7	
	6/3/2002	115	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(0.40)	9.3	42	ND(0.40)	ND(0.40)	13	ND(0.0020)	
	6/3/2002	150	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(0.20)	ND(1.0)	ND(0.40)	6.5	37	ND(0.40)	ND(0.40)	25	ND(0.0020)	
	1/29/2003	150	ND(0.0020)	0.007	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.002	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	5/15/2003	150	ND(0.0020)	0.014	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
	12/18/2003	150	0.001	0.0069	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0077	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0050)	
	5/1/2004	148	ND(0.0010)	0.003	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0027	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	5/13/2004	148	ND(0.0050)	0.01	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.0010)	
	4/29/2005	148	ND(0.0010)	0.0072	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0025	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	3/28/2006	153	0.0012	0.0068	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0017	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
	4/14/2007	150	ND(0.0010)	0.0062	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0013	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	
	4/24/2008	148	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.004	
	RW-20	6/3/2002	40	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.007	0.02	ND(0.0020)	ND(0.0020)	0.017	ND(0.0020)
		6/3/2002	72	ND(0.0020)	ND(0.0020)	0.001	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.028	0.094	ND(0.0020)	ND(0.0020)	0.11	ND(0.0020)
1/29/2003		72	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)	
5/15/2003		72	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	0.002	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
12/18/2003		72	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	
5/1/2004		66	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0064	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
 Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
RW-20 (Cont.)	4/29/2005	66	ND(0.0010)	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0069	0.064	ND(0.0010)	ND(0.0020)	0.052	0.0012	
	3/29/2006	71	ND(0.0020)	0.0081	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0040)	ND(0.0020)	ND(0.0040)	ND(0.010)	0.028	0.098N	ND(0.0020)	ND(0.0040)	0.16	ND(0.0010)	
	4/14/2007	72	ND(0.0010)	0.0082	0.0014	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0044	0.038	ND(0.0010)	ND(0.0020)	0.11	ND(0.0020)	
	4/24/2008	70	ND(0.0010)	0.0058	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0021	0.023	ND(0.0010)	ND(0.0020)	0.054	ND(0.0050)	
RW-21	6/3/2002	90	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	0.009	0.02	ND(0.0020)	ND(0.0020)	0.053	ND(0.0050)	
	6/3/2002	120	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	ND(0.050)	ND(0.050)	ND(0.10)	0.9	7.6	ND(0.0020)	
	6/3/2002	150	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.30)	ND(0.10)	ND(0.050)	ND(0.050)	ND(0.10)	1.2	6	ND(0.0020)	
	1/29/2003	150	ND(0.0020)	0.009	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	5/15/2003	150	ND(0.0020)	0.007	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
	12/18/2003	150	ND(0.0010)	0.0072	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0091	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)	ND(0.0010)
	5/1/2004	145	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/29/2005	146	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	3/29/2006	149	ND(0.0010)	0.012	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/14/2007	150	ND(0.0010)	0.0069	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/24/2008	148	ND(0.0010)	0.0055	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	RW-22	6/3/2002	80	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.21	1.3	ND(0.020)	0.06	1.9	ND(0.010)
		6/3/2002	105	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.17	1.3	ND(0.020)	0.06	1.9	ND(0.010)
		6/3/2002	145	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.16	1.3	ND(0.020)	0.06	1.9	ND(0.010)
1/23/2003		145	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.06	0.96	ND(0.020)	0.05	1.2	ND(0.010)	
5/13/2003		145	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.050)	ND(0.020)	0.08	0.94	ND(0.020)	0.03	1.1	ND(0.010)	
12/17/2003		145	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.097	0.75	ND(0.010)	ND(0.020)	0.8	ND(0.0050)	
5/1/2004		NA	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.010)	ND(0.020)	ND(0.010)	ND(0.020)	ND(0.050)	0.024	0.6	ND(0.010)	ND(0.020)	0.7	ND(0.0050)	
4/28/2005		106	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.038	0.52	ND(0.0050)	ND(0.010)	0.52	ND(0.0050)	
3/27/2006		108	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.029	0.39	ND(0.0050)	ND(0.010)	0.47	ND(0.0025)	
4/11/2007		145	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.016	0.3	ND(0.0050)	ND(0.010)	0.46	ND(0.0025)	
4/22/2008		144	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	0.012	0.18	ND(0.0025)	ND(0.0050)	0.32	ND(0.0050)	
4/3/2009		144	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	0.0086	0.12	ND(0.0025)	ND(0.0025)	0.36	ND(0.0020)	
4/20/2010		144	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	0.0063	0.094	ND(0.0050)	ND(0.0050)	0.38	ND(0.0040)	
4/4/2011		105	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.07	ND(0.0040)	ND(0.0040)	0.36	ND(0.0050)	
4/5/2012		62	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.0061	0.047	ND(0.0040)	ND(0.0040)	0.34	ND(0.0040)
STR-03		5/15/2003	NA	ND(0.0020)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.010)	ND(0.010)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0010)
		12/22/2003	NA	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.54	0.37	ND(0.0050)	0.05	0.43	0.005
	5/4/2004	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0011	ND(0.0010)J
	12/29/2004	NA	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.025)	0.3	0.17	ND(0.0050)	0.027	0.4	ND(0.0010)	
	5/2/2005	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0010)
	1/3/2006	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0013	
	4/3/2006	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	0.0013	
	2/1/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.001	0.0028	ND(0.0010)	0.0045	0.053	ND(0.0010)
	4/16/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0022	0.002	ND(0.0010)	ND(0.0020)	0.0053	0.01	
	11/16/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.002	0.0011	ND(0.0010)	ND(0.0020)	0.0025	ND(0.0010)J	
	1/23/2008	NA	0.021	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.0050)	ND(0.010)	ND(0.0050)	ND(0.010)	ND(0.0050)	0.18	0.24	ND(0.0050)	0.049	0.6	ND(0.0050)J	
	4/21/2008	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0020)J	ND(0.0050)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)J	ND(0.0010)J	ND(0.0025)	
	7/29/2008	NA	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.0050)J	ND(0.010)J	ND(0.0050)J	ND(0.010)J	ND(0.025)J	0.036J	0.041J	ND(0.0050)J	0.15J	0.45J	ND(0.0010)	
	10/22/2008	NA	0.0073	0.0037	ND(0.0025)	ND(0.0025)	0.0032	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	ND(0.0025)	0.0028	ND(0.0025)	0.095	0.34	0.0024	
	1/13/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	0.011	ND(0.0010)	
	4/9/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0083	0.0072	ND(0.0010)	0.012	0.085	ND(0.0010)
	7/14/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0013	ND(0.0010)	0.0079	0.015	ND(0.0010)	
	10/27/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	

**Table 6**  
**Water Quality Data - VOC Results**  
**June 2002 - September 2012**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

SITE ID	DATE	DEPTH	1,1,1-TCA (mg/l)	1,1-DCA (mg/l)	1,1-DCE (mg/l)	1,2-DCA (mg/l)	Carbon tetra chloride (mg/l)	Chloro benzene (mg/l)	Chloro form (mg/l)	Chloro ethane (mg/l)	Chloro methane (mg/l)	PCE (mg/l)	TCE (mg/l)	Trichloro fluoro methane (mg/l)	Vinyl chloride (mg/l)	cis-1,2- DCE (mg/l)	trans-1,2- DCE (mg/l)	
STR-03 (Cont.)	1/28/2010	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0067	0.0084	ND(0.0010)	0.0053	0.047	ND(0.0010)J	
	4/22/2010	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0014	0.003	ND(0.0020)	
	7/14/2010	NA	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0010)J	ND(0.0020)	
	10/12/2010	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	1/5/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	
	4/5/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	7/28/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	10/25/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0067	0.027	ND(0.0040)
	1/18/2012	NA	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	ND(0.0040)	0.011	0.02	ND(0.0040)	0.041	0.21	ND(0.0010)
	4/3/2012	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	8/21/2012	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)
	STRHA-07A	10/20/2008	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.003	ND(0.0010)	ND(0.0020)	0.005	ND(0.0010)
		4/7/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0015	ND(0.0010)	ND(0.0010)	0.0017	ND(0.0010)
		10/27/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.013	0.058	ND(0.0010)	ND(0.0010)	0.051	ND(0.0020)
4/28/2010		NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0035	0.02	ND(0.0010)	ND(0.0010)	0.02	ND(0.0010)	
10/14/2010		NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0061	0.036	ND(0.0020)	ND(0.0020)	0.035	ND(0.0020)	
4/6/2011		NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0026	0.013	ND(0.0020)	ND(0.0020)	0.012	ND(0.0020)	
10/25/2011		NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0021	0.011	ND(0.0020)	ND(0.0020)	0.011	ND(0.0010)	
4/6/2012		NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0054	0.03	ND(0.0020)	ND(0.0020)	0.036	ND(0.0020)	
10/20/2008		NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.011	0.051	ND(0.0010)	ND(0.0020)	0.046	ND(0.0010)	
4/7/2009		NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	
STRHA-07B	10/27/2009	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0044	0.025	ND(0.0010)	ND(0.0010)	0.0091	ND(0.0020)	
	4/28/2010	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0058	0.031	ND(0.0010)	ND(0.0010)	0.0098	ND(0.0010)	
	10/14/2010	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.012	ND(0.0020)	ND(0.0020)	0.0052	ND(0.0020)	
	4/6/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0062	0.028	ND(0.0020)	ND(0.0020)	0.0089	ND(0.0020)	
	10/25/2011	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0055	0.025	ND(0.0020)	ND(0.0020)	0.0076	ND(0.0010)	
	4/6/2012	NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0037	0.019	ND(0.0020)	ND(0.0020)	0.0071	ND(0.0020)	
	STRM-A-SCDS	9/15/2004	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	0.0026	ND(0.0010)
		1/3/2005	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0012	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
		5/19/2005	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	0.0041	ND(0.0010)	ND(0.0020)	0.0016	ND(0.0010)
		1/6/2006	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0013	0.0061	ND(0.0010)	ND(0.0020)	0.007	ND(0.0010)
3/30/2006		NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0036	0.015	ND(0.0010)	ND(0.0020)	0.016	ND(0.0010)	
4/12/2007		NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0015	0.0065	ND(0.0010)	ND(0.0020)	0.0066	ND(0.0010)	
4/23/2008		NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0019	0.0066	ND(0.0010)	ND(0.0020)	0.0024	ND(0.0010)	
10/21/2008		NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0041	0.015	ND(0.0010)	ND(0.0020)	0.0052	ND(0.0010)	
10/23/2008		NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0034	0.014	ND(0.0010)	ND(0.0020)	0.016	ND(0.0010)	
4/6/2009		NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0035	ND(0.0010)	ND(0.0010)	0.0012	ND(0.0010)	
10/27/2009		NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.002	0.0079	ND(0.0010)	ND(0.0010)	0.0034	ND(0.0020)	
4/22/2010		NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	0.0016	0.0059	ND(0.0010)	ND(0.0010)	0.0044	ND(0.0010)	
10/13/2010		NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0051	0.02	ND(0.0020)	ND(0.0020)	0.057	ND(0.0020)	
4/6/2011		NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0033	ND(0.0020)	ND(0.0020)	0.0022	ND(0.0020)	
10/26/2011		NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0025	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0039	
4/6/2012		NA	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	ND(0.0020)	0.0048	0.017	ND(0.0020)	ND(0.0020)	0.013	ND(0.0020)	
UNNAMED_STREAM		3/1/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0010)
	4/16/2007	NA	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0025)	ND(0.0050)	ND(0.0025)	ND(0.0050)	ND(0.013)	0.18	0.16	ND(0.0025)	0.018	0.3	ND(0.020)	
	11/16/2007	NA	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0010)	ND(0.0020)	ND(0.0010)	ND(0.0020)	ND(0.0050)	0.0093	0.0052	ND(0.0010)	ND(0.0020)	0.016	ND(0.020)J	
	1/23/2008	NA	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.020)	ND(0.040)	ND(0.020)	ND(0.040)	ND(0.10)	0.54	0.64	ND(0.020)	ND(0.040)	1.5	ND(0.010)J	
	4/21/2008	NA	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.020)J	ND(0.040)J	ND(0.020)J	ND(0.040)J	ND(0.10)J	0.022J	0.053J	ND(0.020)J	0.14J	3.0J	ND(0.0020)	
	7/29/2008	NA	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.010)J	ND(0.020)J	ND(0.010)J	ND(0.020)J	ND(0.050)J	0.020J	0.034J	ND(0.010)J	0.58J	1.1J	ND(0.010)	





**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-02	6/3/2002	---	42.4	---	---
	6/3/2002	---	---	0.17	0.063
	2/17/2003	61	---	ND(0.05)	0.033
	5/14/2003	55	---	ND(0.05)	620
	12/16/2003	152	---	0.126	805
	5/1/2004	125	---	ND(0.100)	635
	5/2/2005	7060	---	---	---
	4/11/2007	2430	---	---	---
	4/22/2008	866	---	---	---
AP-03-BR	1/6/2006	294	---	---	---
	3/30/2006	56.8	---	---	---
	4/12/2007	74.5	---	---	---
AP-03-DO	1/3/2005	113	---	---	---
	5/2/2005	113	---	---	---
	1/6/2006	128	---	---	---
	3/30/2006	128	---	---	---
	2/1/2007	125	---	---	---
AP-04-BR	1/6/2006	954	---	---	---
	3/30/2006	990	---	---	---
	4/12/2007	1080	---	---	---
AP-04-DO	1/3/2005	178	---	---	---
	5/2/2005	49.9	---	---	---
	2/1/2007	1300	---	---	---
AP-06-BR	6/3/2002	---	2.9	---	---
	6/3/2002	---	---	0.14	ND(0.005)
	1/24/2003	320	---	0.38	0.072
	12/17/2003	378	---	3.12	0.3
	5/1/2004	215	---	0.317	0.15
	4/29/2005	1070	---	---	---
	3/31/2006	1220	---	---	---
AP-06-DO	6/3/2002	---	2.3	---	---
	6/3/2002	---	---	0.03	0.75
	1/24/2003	91	---	ND(0.05)	0.72
	5/14/2003	81	---	0.1	0.78
	12/17/2003	127	---	ND(0.100)	0.644
	5/1/2004	92.6	---	ND(0.100)	0.426
	4/29/2005	96.2	---	---	---
	3/31/2006	94.5	---	---	---
AP-08-DO	8/13/2003	---	---	0.18	0.27
	12/23/2003	68.8	---	0.857	1
	5/3/2004	30.2	---	ND(0.100)	0.122
	1/4/2005	80.9	---	---	---
	4/29/2005	21.3	---	---	---
	3/29/2006	193	---	---	---
	2/5/2007	58.5	---	---	---
AP-09-DO	8/13/2003	---	---	2.5	0.71
	12/29/2003	133	---	1.19	1.79
	5/3/2004	146	---	ND(0.100)	2.31
	12/30/2004	241	---	---	---

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-09-DO (Cont.)	4/29/2005	87.4	---	---	---
	3/29/2006	189	---	---	---
	2/5/2007	174	---	---	---
AP-12-BR	6/3/2002	---	70.4	---	---
	6/3/2002	---	---	26	1.4
	1/24/2003	400	---	ND(0.1)	990D
	5/13/2003	120	---	ND(0.05)	0.008
	12/17/2003	6.49	---	0.2	3.71
	4/23/2004	2360	---	ND(0.300)	3030
	4/3/2006	72.4	---	---	---
	4/13/2007	115	---	---	---
	4/20/2010	1200	---	25	26000
	10/14/2010	33100	--	ND(3.0)	24000
	4/14/2011	10400	---	8.7	12000
	10/28/2011	225	---	ND(5.0)	3900
	4/6/2012	890	---	ND(2.5)	8970
AP-12-DO	6/3/2002	---	22	---	---
	6/3/2002	---	---	0.02	0.2
	1/24/2003	18	---	ND(0.05)	0.014
	5/13/2003	16	---	ND(0.05)	0.076
	12/17/2003	7.49	---	ND(0.100)	0.274
	4/23/2004	24.4	---	ND(0.100)	47.6
	4/29/2005	60.9	---	---	---
	8/30/2005	---	---	---	---
	9/8/2005	---	---	---	---
	4/3/2006	114	---	---	---
	4/13/2007	16.1	---	---	---
	4/20/2010	34.4	---	0.47	5.4
	AP-12-S	6/3/2002	---	11.9	0.07
2/20/2003		34	---	ND(0.1)	65
5/13/2003		47	---	ND(0.05)	9500
12/17/2003		4.54	---	ND(0.100)	18.1
4/23/2004		14.4	---	ND(0.100)	214
4/29/2005		86.2	---	---	---
4/3/2006		58.1	---	---	---
4/13/2007		30.5	---	---	---
AP-13-DO	6/3/2002	---	42.4	---	---
	6/3/2002	---	---	ND(0.01)	0.37
	1/29/2003	140	---	ND(0.05)	2.8
	5/13/2003	170	---	ND(0.05)	0.054
	12/16/2003	2780	---	ND(0.100)	1110
	5/1/2004	438	---	ND(0.100)	ND(0.0100)
	5/2/2005	1760	---	---	---
	12/30/2005	3620	---	---	---
	4/3/2006	4420	---	---	---
	4/11/2007	6380	---	---	---
	7/26/2007	4970	---	0.142	1.5
	11/12/2007	790	---	217	291
	1/23/2008	1980	---	9.41	76.3
4/21/2008	2350	---	1.5	33.6	

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-13-DO (Cont.)	7/28/2008	2290	---	11.9	5.91
	10/22/2008	1480	---	0.124	5.98
	1/14/2009	150	---	0.26	9.3
	4/2/2009	273	---	0.2	13
AP-13-S	6/3/2002	---	2.9	0.05	0.18
	1/29/2003	30	---	ND(0.1)	120D
	5/13/2003	18	---	ND(0.05)	0.91
	12/16/2003	14.6	---	2.44	16.5
	5/1/2004	16.4	---	ND(0.100)	0.396
	5/2/2005	34.8	---	---	---
	4/3/2006	26.6	---	---	---
	4/11/2007	11.2	---	---	---
AP-14-S	6/3/2002	---	80.4	0.03	5.3
	2/17/2003	200	---	ND(0.1)	6600
	5/14/2003	170	---	ND(0.05)	8800
	12/16/2003	312	---	ND(0.100)	1240
	5/1/2004	235	---	ND(1.00)	3820
	5/2/2005	162	---	---	---
AP-15-S	8/26/2002	---	25>	0.1	1.9
	5/14/2003	ND(1)	---	ND(0.05)	ND(0.005)
	12/22/2003	280	---	0.221	0.0467
	5/3/2004	234	---	ND(0.100)	0.101
	12/30/2004	923	---	ND(0.100)	0.0368
	4/29/2005	220	---	ND(0.100)	0.0118
	3/29/2006	205	---	ND(0.100)	0.0513
	2/5/2007	59	---	ND(0.100)	0.0198
AP-19	6/3/2002	---	---	ND(0.01)	1.1
	6/11/2002	---	16.5	---	---
	5/14/2003	18	---	ND(0.05)	0.16
	12/15/2003	2.51	---	ND(0.100)	0.0173
	4/26/2004	20.7	---	ND(0.100)	ND(0.0100)
	4/28/2005	19.4	---	---	---
	3/31/2006	23.9	---	---	---
	10/23/2008	77.6	---	ND(0.100)	0.814
	10/27/2009	4.1	---	ND(0.10)	ND(0.010)
	4/21/2010	18.7	---	ND(0.10)	0.095
	10/14/2010	17.2	--	ND(0.10)	0.029
	4/6/2011	24.8	---	ND(0.10)	0.061
	10/27/2011	ND(1.0)	---	ND(0.10)	0.012
4/5/2012	29	---	ND(0.10)	0.115	
AP-20	6/3/2002	---	---	ND(0.01)	0.69
	6/11/2002	---	42.3	---	---
	5/14/2003	4	---	ND(0.05)	9.8
	12/15/2003	3.61	---	ND(0.100)	0.369
	4/26/2004	4	---	ND(0.100)	6.95
	4/28/2005	3.46	---	---	---
	3/31/2006	39.6	---	---	---
	10/23/2008	3730	---	ND(1.00)	20900
	10/27/2009	11.1	---	ND(0.10)	6.9
	4/21/2010	31.3	---	ND(0.10)	0.011

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-20 (Cont.)	10/14/2010	29.4	--	ND(0.10)	0.012
	4/6/2011	15.4	---	ND(0.10)	ND(0.010)
	10/27/2011	2.0	---	ND(0.10)	0.028
	4/5/2012	86		ND(0.10)	23.1
AP-21	6/3/2002	---	---	0.01	0.58
	6/11/2002	---	2.0	---	---
	5/14/2003	4	---	ND(0.05)	7.6
	12/15/2003	2.17	---	0.206	0.681
	4/26/2004	7.44	---	ND(0.100)	8.47
	4/28/2005	2.26	---	---	---
	3/31/2006	138	---	---	---
	10/23/2008	3950	---	ND(1.00)	24000
	11/23/2009	850	---	8.5	14000
	4/21/2010	900	---	10	15000
	10/14/2010	1690	--	ND(2.0)	9000
	4/14/2011	450	---	3.2	3400
	10/27/2011	190	---	ND(2.5)	1100
4/5/2012	286		ND(1.0)	972	
AP-22	6/3/2002	---	---	ND(0.01)	2.2
	6/11/2002	---	9.6	---	---
	5/14/2003	2	---	ND(0.05)	5.2
	12/15/2003	1.78	---	ND(0.100)	0.2
	4/26/2004	7.59	---	ND(0.100)	32.7
	4/28/2005	9.14	---	---	---
	3/31/2006	175	---	---	---
	10/23/2008	5220	---	ND(1.00)	31300
	10/27/2009	378	---	ND(0.50)	3800
	4/21/2010	489	---	ND(1.0)	73
	10/14/2010	491	--	ND(1.0)	240
	4/14/2011	208	---	ND(0.10)	0.37
	10/27/2011	225	---	ND(2.5)	1200
4/5/2012	1360		ND(2.0)	2030	
AP-23-DO	12/29/2004	177	---	---	---
	5/2/2005	398	---	---	---
	12/30/2005	127	---	---	---
	4/3/2006	633	---	---	---
	1/31/2007	416	---	---	---
	4/11/2007	450	---	---	---
	11/12/2007	78	---	12.3	30.8
	1/23/2008	56.2	---	14.4	51.8
	4/21/2008	64.7	---	2.01	31.5
	7/28/2008	35.8	---	0.78	23.9
	10/22/2008	63.9	---	136	181
	1/14/2009	43.6	---	1.7	6.4
	4/2/2009	60.7	---	3.2	19
AP-24-DO	12/29/2004	1990	---	---	---
	5/2/2005	4130	---	---	---
	12/30/2005	429	---	---	---
	4/3/2006	1160	---	---	---
	10/11/2006	---	---	4.79	4430

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-24-DO (Cont.)	1/30/2007	778	---	28	104
	4/10/2007	550	---	0.346	3.17
	8/9/2007	267	---	ND(0.100)	16.6
	11/12/2007	93.2	---	10.4	33.7
	1/23/2008	375	---	61.5	143
	4/21/2008	611	---	12.4	48.9
	7/28/2008	411	---	5.52	28.4
	10/22/2008	111	---	26.9	59.5
	1/14/2009	117	---	0.48	7.5
	4/2/2009	283	---	0.25	11
AP-25-DO	12/29/2004	17.2	---	---	---
	5/2/2005	149	---	---	---
	12/30/2005	79.3	---	---	---
	4/3/2006	423	---	---	---
	10/11/2006	---	---	1.98	1300
	1/30/2007	170	---	15.2	42.8
	4/10/2007	15.6	---	ND(0.100)	2.74
	8/9/2007	ND(2.00)	---	ND(0.100)	0.0692
	11/12/2007	3.61	---	ND(0.100)	0.146
	1/23/2008	19.7	---	0.284	0.633
	4/21/2008	96.8	---	0.804	2.12
	7/28/2008	ND(2.00)	---	ND(0.100)	ND(0.0100)
	10/22/2008	150	---	0.589	1.06
1/14/2009	34.9	---	0.28	0.24	
4/2/2009	61.1	---	ND(0.10)	0.11	
AP-26-DO	12/28/2004	23.5	---	---	---
	4/28/2005	22.6	---	---	---
	1/3/2006	20	---	---	---
	1/31/2007	11.1	---	---	---
AP-27-DO	12/28/2004	48.9	---	---	---
	5/3/2005	60.4	---	---	---
	1/3/2006	796	---	---	---
	4/7/2006	115	---	---	---
	1/31/2007	91.8	---	---	---
	4/13/2007	30.3	---	---	---
	11/15/2007	10.2	---	ND(0.100)	1.82
	4/25/2008	114	---	---	---
	10/22/2008	18.4	---	ND(0.100)	3.55
	4/9/2009	57.8	---	ND(0.10)	0.098
	10/28/2009	13.7	---	ND(0.10)	0.1
	4/21/2010	29.4	---	ND(0.10)	0.1
	10/14/2010	11.2	--	ND(0.10)	0.42
	4/7/2011	387J	---	ND(0.10)	0.046
	10/26/2011	140	---	ND(0.10)	2.8
4/6/2012	450	---	ND(0.10)	0.053	
AP-28-DO	12/30/2004	236	---	---	---
	4/29/2005	252	---	---	---
	3/29/2006	286	---	---	---
	2/5/2007	306	---	---	---

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
AP-29-DO	12/30/2004	226	---	---	---
	4/29/2005	264	---	---	---
	3/29/2006	298	---	---	---
	2/5/2007	313	---	---	---
AP-30R-DO	4/7/2011	1000J	---	6	7900
	11/7/2011	2730	---	ND(50)	20000
	11/7/2011	2730		ND(50)	20000
	4/17/2012	1070		ND(5.0)	6450
AP-31-DO	4/6/2011	3380J	---	2.5	2200
	11/7/2011	3240		ND(1.0)	775
	4/17/2012	2650		ND(0.10)	0.576
AP-32-DO	4/7/2011	1440J	---	ND(1.0)	75
	11/7/2011	979		ND(0.10)	0.055
	4/17/2012	631		ND(0.10)	0.072
APBIO-01	4/12/2007	246	---	---	---
B-2	4/14/2007	265	---	---	---
	11/16/2007	52.8	---	---	---
	4/25/2008	689	---	---	---
B-3	6/3/2002	---	2.5	0.23	0.027
	1/29/2003	9	---	0.06	0.6
	5/13/2003	10	---	ND(0.05)	0.076
	12/16/2003	20.7	---	ND(0.100)	43.3
	5/2/2004	14.7	---	ND(0.100)	0.0294
	4/27/2005	16.3	---	---	---
	3/31/2006	10.1	---	---	---
	4/10/2007	9.26	---	---	---
	4/21/2008	10.9	---	---	---
BR-1_ZONE1	5/16/2003	47	---	4.1	0.38
BR-1_ZONE2	5/16/2003	8	---	1.3	0.2
BR-1_ZONE3	5/16/2003	190	---	1	0.26
BR-5_ZONE1	6/3/2002	---	---	0.22	0.057
	1/31/2003	26	---	0.05	0.012
	5/16/2003	71	---	ND(0.05)	2300
	12/19/2003	31	---	ND(0.100)	0.025
	5/4/2004	75.5	---	ND(0.100)	0.0136
	1/5/2005	59.1	---	---	---
	5/3/2005	29.9	---	---	---
	1/5/2006	14.7	---	---	---
	4/3/2006	18.1	---	---	---
BR-5_ZONE2	1/31/2003	15	---	0.14	0.039
	5/16/2003	17	---	0.2	2.7
	12/19/2003	36.8	---	ND(0.100)	0.816
	5/4/2004	66.9	---	ND(0.100)	0.216
	1/5/2005	24.9	---	---	---
	5/3/2005	13.4	---	---	---
	1/5/2006	19.8	---	---	---
	4/3/2006	14.4	---	---	---
BR-5_ZONE3	6/3/2002	---	6.5	---	---
	1/31/2003	70	---	ND(0.1)	450D
	5/16/2003	12	---	0.06	0.023

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
BR-5_ZONE3 (Cont.)	12/19/2003	62.6	---	0.752	238
	5/4/2004	34.8	---	ND(0.100)	3.14
	5/3/2005	18.5	---	---	---
	1/5/2006	13.4	---	---	---
	4/3/2006	17.1	---	---	---
BR-6_ZONE1	1/5/2005	56	---	---	---
	5/3/2005	54.4	---	---	---
	1/5/2006	60	---	---	---
	4/3/2006	60.5	---	---	---
	4/13/2007	82.2	---	---	---
BR-6_ZONE2	1/5/2005	59.7	---	---	---
	5/3/2005	84.3	---	---	---
	1/5/2006	68.9	---	---	---
	4/3/2006	74.5	---	---	---
	4/13/2007	64.7	---	---	---
BR-6_ZONE3	5/3/2005	65.9	---	---	---
	1/5/2006	60	---	---	---
	4/3/2006	59.8	---	---	---
	4/13/2007	281	---	---	---
BW-01	11/29/2006	---	---	ND(0.100)	0.0282
	4/10/2007	96.1	---	36.5	10.7
	7/19/2007	83.4	---	32	22.4
	11/12/2007	18	---	7.57	5.71
	1/24/2008	97.1	---	24.5	4.47
	4/21/2008	73	---	12.5	2.82
	7/28/2008	48.1	---	ND(0.100)	1.04
	10/21/2008	35.5	---	2.86	3.82
	1/13/2009	86.1	---	2.1	2.3
	4/2/2009	67.3	---	3.8	3.2
BW-02	10/11/2006	---	---	0.123	35.1
	1/30/2007	51.9	---	107	50.8
	4/10/2007	282	---	61.1	17.1
	7/19/2007	77.3	---	14.8	8.14
	11/12/2007	21	---	19	7
	1/24/2008	84.5	---	25	3.49
	4/21/2008	74	---	16.5	4.56
	7/28/2008	45	---	1.28	1.54
	10/21/2008	45.4	---	1.45	3.42
	1/13/2009	87.2	---	8.2	2.3
4/2/2009	97.8	---	6.4	2.4	
BW-03	10/11/2006	---	---	ND(0.100)	1.86
	1/30/2007	67.2	---	74.1	67.4
	4/10/2007	248	---	64.5	14.8
	7/19/2007	57.3	---	24.5	12.5
	11/12/2007	31.7	---	20.3	9.02
	1/24/2008	106	---	37.4	7.44
	4/21/2008	55.9	---	28.7	6.25
	7/28/2008	37.6	---	1.67	3.84
	10/21/2008	50.1	---	17.9	5.33
	1/13/2009	80.8	---	13	5.6
4/2/2009	91.3	---	18	8	



**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
BW-04	10/11/2006	---	---	ND(0.100)	0.0434
	1/30/2007	88.4	---	25.2	27.9
	4/10/2007	84.8	---	17.2	6.49
	7/19/2007	63	---	26	8.3
	11/12/2007	247	---	49.6	11
	1/22/2008	173	---	11.9	25.3
	4/21/2008	128	---	9.61	2.96
	7/28/2008	38	---	7.42	3.18
	10/21/2008	58.2	---	7.75	2.15
	1/13/2009	96.5	---	9.5	3.8
	4/2/2009	95.1	---	10	3.2
BW-05	10/11/2006	---	---	ND(0.100)	ND(0.0100)
	1/30/2007	82.5	---	39.8	63
	4/10/2007	86.4	---	8	4.78
	7/19/2007	83.4	---	3.21	2.05
	11/12/2007	118	---	9.6	3.61
	1/22/2008	140	---	13.5	3.49
	4/21/2008	115	---	5.68	2.28
	7/28/2008	81.1	---	5.45	2.28
	10/21/2008	77.1	---	10.5	1.75
	1/13/2009	205	---	20	4.7
	4/2/2009	130	---	27	4.9
BW-08	11/29/2006	---	---	ND(0.100)	4.01
	4/10/2007	91.2	---	33.7	36.7
	7/19/2007	87	---	15.2	12
	11/12/2007	252	---	43.5	13.2
	1/22/2008	186	---	43	13.5
	4/21/2008	164	---	26	9.56
	7/28/2008	131	---	21.8	9.42
	10/21/2008	148	---	24.5	1.75
	1/13/2009	124	---	18	5.3
	4/2/2009	104	---	27	7.9
BW-09	11/29/2006	---	---	0.42	24.5
	4/10/2007	74.1	---	27.6	27.6
	8/9/2007	122	---	16.5	7.07
	11/12/2007	472	---	32.2	15.1
	1/22/2008	132	---	25.4	15.1
	4/21/2008	177	---	31.8	10.4
	7/28/2008	128	---	12.2	4.17
	10/21/2008	141	---	62.4	19.4
	1/13/2009	131	---	20	7.1
	4/2/2009	174	---	41	11
CL02-BR	6/3/2002	---	80	---	---
	6/3/2002	---	---	0.03	0.022
	1/23/2003	100	---	ND(0.05)	ND(0.005)
	5/14/2003	140	---	ND(0.05)	0.016
	12/18/2003	92.8	---	ND(0.100)	0.0693
	5/2/2004	123	---	ND(0.100)	0.0787
	Dup. 5/2/2004	124	---	ND(0.100)	0.0745
12/29/2004	108	---	ND(0.100)	0.0138	

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
CL02-BR (Cont.)	4/29/2005	97.5	---	ND(0.100)	0.0319
	1/4/2006	95.3	---	ND(0.100)	ND(0.0100)
	3/31/2006	177	---	0.964	0.272
	2/1/2007	159	---	ND(0.100)	0.0206
	4/11/2007	197	---	ND(0.100)	0.0178
	11/14/2007	104	---	0.168	0.129
	4/24/2008	129	---	0.527	0.127
CL03-BR	6/3/2002	---	59.2	---	---
	6/3/2002	---	---	0.5	0.32
	1/29/2003	30	---	ND(0.1)	160D
	5/14/2003	14	---	ND(0.05)	950
	12/18/2003	24.2	---	ND(0.100)	157
	5/1/2004	2790	---	ND(3.00)	29100
	4/29/2005	156	---	---	---
	3/29/2006	165	---	---	---
CL03-DO	6/3/2002	---	26	---	---
	6/3/2002	---	---	0.09	ND(0.005)
	1/29/2003	42	---	ND(0.05)	0.34
	5/14/2003	7	---	ND(0.05)	0.15
	12/18/2003	6.97	---	0.118	0.0395
	5/1/2004	54.4	---	ND(0.100)	1.07
	4/29/2005	14.6	---	---	---
	3/29/2006	58.3	---	---	---
CL03-S	6/3/2002	---	26.4	0.01	0.12
	1/29/2003	120	---	ND(0.05)	0.21
	5/14/2003	78	---	ND(0.05)	0.067
	12/17/2003	143	---	ND(0.100)	0.0779
	5/1/2004	63.1	---	ND(0.100)	0.0394
	4/29/2005	172	---	---	---
	3/29/2006	320	---	---	---
CL04-BR	6/3/2002	---	---	1.1	1.1
	5/14/2003	57	---	0.87	0.41
	12/16/2003	59.2	---	ND(0.100)	0.122
	Dup. 12/16/2003	59.6	---	ND(0.100)	0.121
	4/26/2004	62.8	---	0.717	0.373
	4/28/2005	73.3	---	---	---
	3/28/2006	70.6	---	---	---
	4/11/2007	177	---	---	---
CL04-DO	6/3/2002	---	---	ND(0.01)	ND(0.005)
	6/11/2002	---	72.1	---	---
	5/14/2003	110	---	ND(0.05)	ND(0.005)
	12/16/2003	83.7	---	ND(0.100)	ND(0.0100)
	4/26/2004	97.2	---	ND(0.100)	ND(0.0100)
	4/28/2005	123	---	---	---
	3/28/2006	80.8	---	---	---
	4/11/2007	118	---	---	---
CL05-DOA	6/3/2002	---	70.8	---	---
	6/3/2002	---	---	0.36	0.53
	1/29/2003	330	---	1.1	8.9
	5/13/2003	ND(1)	---	ND(0.05)	0.35

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
CL05-DOA (Cont.)	12/15/2003	ND(1.00)	---	6.53	1140
	5/2/2004	200	---	ND(0.100)	0.554
	4/27/2005	172	---	---	---
	3/31/2006	1360	---	---	---
CL06-BR	5/15/2003	210	---	ND(0.05)	0.01
CL06-DO	5/15/2003	5	---	ND(0.05)	ND(0.005)
CL08-DO	12/23/2003	59.9	---	ND(0.100)	ND(0.0100)
CL09-BR_ZONE1	5/16/2003	8	---	2.7	0.12
	12/19/2003	8.8	---	0.412	0.119
	5/3/2004	9.47	---	1.15	0.446
	1/4/2005	10.8	---	---	---
	5/3/2005	17.1	---	---	---
	1/5/2006	10.6	---	---	---
	4/3/2006	29.8	---	---	---
CL09-BR_ZONE2	6/3/2002	---	---	0.72	0.28
	5/16/2003	16	---	1.3	0.37
	12/19/2003	14.3	---	1.74	0.382
	5/3/2004	19.1	---	1.58	0.49
	1/4/2005	36.4	---	---	---
	5/3/2005	14	---	---	---
	1/5/2006	19.1	---	---	---
CL09-BR_ZONE3	5/16/2003	48	---	2.9	0.35
	12/19/2003	59.2	---	1.6	0.365
	5/3/2004	211	---	4.91	0.488
	1/4/2005	122	---	---	---
	5/3/2005	87.2	---	---	---
	1/5/2006	547	---	---	---
	4/3/2006	368	---	---	---
CL09-DO	6/3/2002	---	---	ND(0.01)	0.021
	1/28/2003	120	---	ND(0.05)	0.011
	5/15/2003	110	---	ND(0.05)	0.006
	12/17/2003	112	---	ND(0.100)	0.24
	5/1/2004	187	---	ND(0.100)	0.015
	Dup. 5/1/2004	187	---	ND(0.100)	0.0146
	5/2/2005	174	---	---	---
4/7/2006	164	---	---	---	
CL09-S	6/3/2002	---	---	ND(0.01)	0.006
CL10-BR	6/3/2002	---	---	1.9	0.35
	6/11/2002	---	6.2	---	---
	5/14/2003	86	---	0.4	0.13
	12/16/2003	92.7	---	2.4	0.178
	4/26/2004	29.7	---	1.09	0.172
	12/30/2004	33.8	---	0.247	0.129
	4/28/2005	62.8	---	ND(0.100)	21.5
	3/28/2006	41.2	---	0.249	0.311
	1/31/2007	24.7	---	ND(0.100)	0.203
	4/10/2007	22	---	0.116	0.238
10/21/2008	24.9	---	1.65	0.784	
CL10-BR2	4/27/2004	60.7	---	ND(0.100)	ND(0.0100)
	4/27/2004	74.7	---	ND(0.100)	0.073

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
CL10-DO	6/3/2002	---	---	ND(0.01)	0.032
	6/11/2002	---	3.3	---	---
	5/14/2003	24	---	ND(0.05)	0.91
	12/16/2003	21	---	ND(0.100)	0.203
	4/26/2004	24.9	---	ND(0.100)	1.15
	12/30/2004	28	---	ND(0.100)	11.1
	4/28/2005	13	---	0.3	0.055
	3/28/2006	43.9	---	ND(0.100)	287
	1/31/2007	45.1	---	ND(0.100)	91.2
	4/10/2007	43.4	---	ND(0.100)	120
	10/21/2008	33.6	---	ND(0.100)	164
CL10-S	6/3/2002	---	---	0.03	0.015
	6/11/2002	---	24.1	---	---
	5/14/2003	31	---	ND(0.05)	0.009
	12/16/2003	60.1	---	ND(0.100)	ND(0.0100)
	4/26/2004	23.4	---	ND(0.100)	0.0216
	12/30/2004	87.3	---	ND(0.100)	ND(0.0100)
	4/28/2005	70.8	---	ND(0.100)	0.0437
	3/28/2006	67.6	---	ND(0.100)	0.0581
	1/31/2007	55.4	---	ND(0.100)	0.0128
	4/10/2007	60	---	ND(0.100)	0.0207
10/21/2008	12.3	---	0.12	0.0194	
CL12-S1	6/3/2002	---	54.8	---	---
	6/3/2002	---	---	0.11	0.55
	2/26/2003	230	---	0.17	0.48
	5/15/2003	230	---	0.48	0.71
	12/17/2003	74.9	---	ND(0.100)	0.117
	5/1/2004	80.7	---	ND(0.100)	0.325
	4/29/2005	56.5	---	---	---
	3/28/2006	332	---	---	---
GZ-1	8/26/2002	---	25>	9.3	0.86
	1/28/2003	190	---	0.62	1.1
	5/14/2003	ND(1)	---	ND(0.05)	ND(0.005)
	12/23/2003	124	---	1.38	0.82
	5/3/2004	243	---	1	0.822
	4/29/2005	373	---	---	---
	4/7/2006	253	---	---	---
GZ-2R	8/26/2002	---	25>	0.13	2.2
	1/29/2003	ND(1)	---	0.07	3.4
	5/14/2003	ND(1)	---	ND(0.05)	ND(0.005)
	12/22/2003	99.9	---	ND(0.100)	0.2
	5/3/2004	328	---	ND(0.100)	0.0157
	4/29/2005	405	---	---	---
	4/7/2006	344	---	---	---
GZ-4	8/26/2002	---	25>	29	3
	5/3/2004	313	---	9.76	2.41
	Dup. 5/3/2004	314	---	9.97	2.56
MW-002R	6/3/2002	---	118.6	0.12	1.4
	1/23/2003	150	---	ND(0.05)	0.34
	5/14/2003	97	---	ND(0.05)	0.19

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
MW-002R (Cont.)	12/18/2003	215	---	0.209	0.927
	5/2/2004	147	---	ND(0.100)	0.0475
	4/29/2005	383	---	---	---
	3/31/2006	111	---	---	---
MW-004R	6/3/2002	---	58.8	---	---
	6/3/2002	---	---	0.12	0.13
	5/14/2003	93	---	ND(0.05)	1.1
	12/18/2003	100	---	ND(0.100)	0.0231
	Dup. 12/18/2003	102	---	ND(0.100)	0.0215
	5/2/2004	8.44	---	ND(0.100)	ND(0.0100)
	4/29/2005	80.9	---	---	---
	3/31/2006	188	---	---	---
MW-007R	6/3/2002	---	56.4	---	---
	6/3/2002	---	---	0.06	0.074
	1/23/2003	260	---	0.18	0.46
	5/14/2003	880	---	ND(0.05)	0.5
	12/17/2003	64.4	---	ND(0.100)	ND(0.0100)
	5/2/2004	127	---	ND(0.100)	ND(0.0100)
	4/29/2005	1020	---	---	---
	3/31/2006	1140	---	---	---
MW-008	6/3/2002	---	104.4	58	5.4
	1/29/2003	100	---	1.4	0.75
	5/12/2003	69	---	1.2	0.66
	12/17/2003	5.46	---	3.05	0.191
	4/23/2004	134	---	34.4	3.51
	4/27/2005	85.1	---	---	---
	3/27/2006	79.3	---	---	---
	4/23/2008	87.4	---	---	---
MW-009	6/13/2002	---	24.8	11	26
	1/23/2003	980	---	0.61	30
	5/12/2003	780	---	0.93	23
	12/15/2003	1120	---	20.3	20.5
	4/23/2004	967	---	ND(0.100)	21.3
	Dup. 4/23/2004	980	---	ND(0.100)	20.5
	4/27/2005	773	---	---	---
	3/27/2006	990	---	---	---
	10/11/2006	---	---	21.3	20.9
	1/30/2007	676	---	96.2	5.34
	4/10/2007	774	---	128	13.1
	7/19/2007	659	---	86.6	7.91
	11/12/2007	68	---	1.01	0.16
	1/23/2008	164	---	18.8	1.67
	4/21/2008	330	---	90.7	6.29
	7/28/2008	656	---	80.4	6.74
	10/21/2008	742	---	62.9	7.31
1/14/2009	822	---	60	7	
4/2/2009	711	---	70	6	
MW-009A	6/13/2002	---	25	0.02	0.055
	1/23/2003	260	---	0.1	6.8
	5/12/2003	99	---	0.06	1

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
MW-009A (Cont.)	12/15/2003	11	---	ND(0.100)	0.018
	4/23/2004	1.87	---	ND(0.100)	0.0133
	4/27/2005	7.65	---	---	---
	3/27/2006	38.5	---	---	---
	4/12/2007	27.8	---	---	---
	4/21/2008	22.3	---	---	---
MW-010	5/13/2003	ND(1)	---	---	---
	5/13/2003	---	---	0.07	0.035
MW-013	6/3/2002	---	44	---	---
	6/3/2002	---	---	14	11
	1/27/2003	2600	---	ND(0.1)	46
	5/13/2003	1800	---	ND(0.05)	120
	12/16/2003	981	---	ND(0.100)	109
	5/1/2004	619	---	ND(0.100)	0.0122
	4/28/2005	718	---	---	---
	3/31/2006	2720	---	---	---
	4/10/2007	2430	---	---	---
	4/22/2008	395	---	---	---
	4/21/2010	586	---	2.4	2300
	10/14/2010	928	--	ND(1.0)	4800
	4/14/2011	1920	---	2.8	3100
10/27/2011	1410	---	ND(0.50)	510	
4/5/2012	930	---	ND(0.50)	563	
MW-014A	6/3/2002	---	20.5	---	---
	6/3/2002	---	---	0.03	0.022
	1/23/2003	10	---	ND(0.05)	0.12
	5/13/2003	38	---	0.08	0.27
	12/17/2003	10.9	---	ND(0.100)	ND(0.0100)
	5/1/2004	16.1	---	ND(0.100)	ND(0.0100)
	4/28/2005	14.4	---	---	---
3/31/2006	5.6	---	---	---	
MW-030	1/4/2005	138	---	---	---
	4/27/2005	106	---	---	---
	12/29/2005	190	---	ND(0.100)	ND(0.0100)
	4/7/2006	263	---	---	---
	2/1/2007	138	---	---	---
	4/14/2007	146	---	---	---
	11/16/2007	628	---	ND(0.100)	0.914
	4/25/2008	171	---	---	---
	10/22/2008	1210	---	ND(0.100)	0.011
4/9/2009	135	---	0.16	0.012	
MW-032	6/3/2002	---	---	0.02	ND(0.005)
	6/11/2002	---	12.8	---	---
	5/14/2003	10	---	ND(0.05)	0.012
	12/15/2003	12.6	---	3.9	0.0755
	4/26/2004	29.4	---	ND(0.100)	0.021
	4/28/2005	6.45	---	---	---
	3/31/2006	38.7	---	---	---
MW-033B	6/3/2002	---	17.6	---	---
	6/13/2002	---	---	0.07	6.2

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
MW-033B (Cont.)	5/14/2003	760	---	ND(0.05)	0.62
	12/17/2003	298	---	0.101	0.0399
	4/27/2004	766	---	ND(0.100)	0.492
	Dup. 4/27/2004	770	---	ND(0.100)	0.491
	4/28/2005	1000	---	---	---
	3/31/2006	686	---	---	---
MW-036	6/3/2002	---	46.2	---	---
	6/3/2002	---	---	0.04	0.078
	1/24/2003	210	---	ND(0.05)	2.8
	5/15/2003	96	---	0.13	0.21
	12/17/2003	65.6	---	ND(0.100)	0.0704
	5/1/2004	386	---	ND(0.100)	0.0678
	4/29/2005	106	---	---	---
	3/28/2006	693	---	---	---
MW-104R	6/3/2002	---	2.7	---	---
	6/3/2002	---	---	0.17	0.035
MW-2_32-TOZER	11/8/2011	489	---	2.58	---
OB-04-BR	6/3/2002	---	9.8	---	---
	6/3/2002	---	---	0.02	ND(0.005)
	1/24/2003	18	---	0.6	0.016
	5/14/2003	7	---	0.2	0.01
	12/16/2003	10.8	---	0.646	0.037
	Dup. 12/16/2003	10.7	---	0.616	0.0359
	4/27/2004	8.98	---	0.186	0.0182
	4/29/2005	13.3	---	---	---
3/28/2006	13.5	---	---	---	
OB-04-DO	6/3/2002	---	17.4	---	---
	6/3/2002	---	---	ND(0.01)	1.7
	1/24/2003	40	---	0.05	0.5
	5/14/2003	44	---	0.53	0.54
	12/16/2003	7.63	---	0.108	0.0545
	4/27/2004	4.79	---	ND(0.100)	ND(0.0100)
	4/29/2005	13.2	---	---	---
3/28/2006	78.3	---	---	---	
OB-04-S	6/3/2002	---	130.4	1.2	6.5
	1/24/2003	130	---	0.19	1.2
	5/14/2003	97	---	1.2	1.7
	12/16/2003	324	---	0.219	2.71
	4/27/2004	108	---	0.356	0.142
	4/29/2005	186	---	---	---
	3/28/2006	290	---	---	---
OB-05-BR	6/3/2002	---	58.8	---	---
	6/3/2002	---	---	1.7	0.42
	1/24/2003	100	---	0.17	0.04
	5/14/2003	100	---	0.61	0.016
	12/16/2003	107	---	ND(0.100)	0.0137
	4/27/2004	108	---	ND(0.100)	0.0143
	12/30/2004	108	---	---	---
	4/29/2005	107	---	---	---
	1/4/2006	93.8	---	---	---
	3/29/2006	107	---	---	---
2/1/2007	102	---	---	---	

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-05-DO	6/3/2002	---	19.5	---	---
	6/3/2002	---	---	0.06	0.41
	1/24/2003	96	---	0.57	0.63
	5/14/2003	18	---	0.84	0.076
	12/16/2003	20	---	0.535	0.179
	4/27/2004	21.6	---	ND(0.100)	ND(0.0100)
	12/30/2004	20.8	---	---	---
	4/29/2005	21.8	---	---	---
	1/4/2006	19.6	---	---	---
	3/29/2006	414	---	---	---
	2/1/2007	28.2	---	---	---
OB-05-S	6/3/2002	---	44	0.01	0.31
	2/20/2003	460	---	ND(0.05)	0.18
	5/14/2003	90	---	0.2	0.18
	12/16/2003	215	---	ND(0.100)	0.0548
	4/27/2004	86.8	---	ND(0.100)	ND(0.0100)
	4/29/2005	41.5	---	---	---
OB-06-BR	6/3/2002	---	---	18	0.73
	1/29/2003	76	---	15	1.8
	5/15/2003	1	---	0.29	0.021
	12/17/2003	26.2	---	1.28	0.176
	5/1/2004	45.6	---	0.663	0.257
	12/30/2004	43.7	---	---	---
	5/2/2005	42.3	---	---	---
	1/4/2006	42	---	---	---
	4/7/2006	46.9	---	---	---
2/1/2007	42.8	---	---	---	
OB-06-DO	6/3/2002	---	1.1	---	---
	6/3/2002	---	---	0.01	0.12
	1/29/2003	86	---	ND(0.05)	0.045
	5/15/2003	ND(1)	---	1.1	0.48
	12/17/2003	114	---	0.287	0.776
	5/1/2004	136	---	6.68	1.28
	12/30/2004	123	---	---	---
	5/2/2005	168	---	---	---
	1/4/2006	140	---	---	---
	4/7/2006	154	---	---	---
2/1/2007	127	---	---	---	
OB-07-DO	8/26/2002	---	25>	8.1	1.7
	5/14/2003	210	---	5.6	0.86
	12/19/2003	2.69	---	ND(0.100)	ND(0.0100)
	5/3/2004	21.4	---	0.828	0.123
	12/30/2004	2.38	---	---	---
	4/29/2005	18	---	---	---
	3/29/2006	183	---	---	---
	2/1/2007	14.5	---	---	---
OB-08-DO	8/26/2002	---	25>	44	2
	5/15/2003	130	---	46	1.6
	12/18/2003	150	---	44.2	1.68



**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-08-DO (Cont.)	5/3/2004	139	---	47.9	1.79
	1/4/2005	152	---	---	---
	4/29/2005	153	---	---	---
	1/4/2006	147	---	---	---
	4/7/2006	164	---	---	---
	2/1/2007	162	---	---	---
OB-08-S	8/26/2002	---	25>	9.1	1.7
	5/3/2004	97.9	---	ND(0.100)	0.0112
OB-09-BR	6/3/2002	---	10.4	---	---
	6/3/2002	---	---	7.5	0.37
	1/23/2003	19	---	0.08	0.01
	5/12/2003	10	---	0.23	0.064
	12/15/2003	12.5	---	0.177	0.063
	4/23/2004	20.6	---	ND(0.100)	0.0237
	12/29/2004	15.7	---	0.343	0.0435
	Dup. 12/29/2004	15.2	---	0.34	0.0428
	4/27/2005	22.8	---	0.165	0.0326
	12/30/2005	15.6	---	0.266	0.0527
	3/27/2006	23.2	---	0.228	0.0602
	11/29/2006	---	---	6.18	0.262
	1/31/2007	6.77	---	0.715	0.189
	4/10/2007	19.3	---	2.26	0.216
	7/19/2007	12.4	---	0.399	0.0918
	8/9/2007	14	---	0.407	0.0965
	11/12/2007	18.3	---	0.792	0.157
	1/22/2008	17.8	---	1.1	0.157
	4/21/2008	15.2	---	0.394	0.0828
	7/29/2008	3.33	---	1.97	0.0971
	10/22/2008	10.8	---	2.84	0.17
	1/14/2009	16	---	1.5	0.17
4/9/2009	20	---	1.5	0.24	
OB-09-DO	6/3/2002	---	81.3	---	---
	6/3/2002	---	---	2.3	0.36
	1/23/2003	15	---	0.05	0.062
	5/12/2003	2	---	ND(0.05)	ND(0.005)
	12/15/2003	4.48	---	ND(0.100)	0.0319
	Dup. 12/15/2003	4.24	---	---	---
	4/23/2004	2.09	---	ND(0.100)	ND(0.0100)
	12/29/2004	4.88	---	ND(0.100)	ND(0.0100)
	4/27/2005	6.58	---	ND(0.100)	ND(0.0100)
	12/30/2005	13.3	---	ND(0.100)	ND(0.0100)
	3/27/2006	18.5	---	4.84	0.278
	11/29/2006	---	---	1.01	0.146
	1/31/2007	9.75	---	0.181	0.0364
	4/10/2007	18.3	---	1.12	0.0804
	7/19/2007	9.45	---	0.616	0.138
	11/12/2007	9.39	---	ND(0.100)	0.0444
	1/22/2008	12	---	ND(0.100)	0.0171
4/21/2008	3.64	---	ND(0.100)	0.0445	
7/29/2008	ND(2.00)	---	ND(0.100)	ND(0.0100)	

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-09-DO (Cont.)	10/22/2008	6.3	---	0.255	0.0796
	1/13/2009	32.6	---	ND(0.10)	ND(0.010)
	4/9/2009	44.6	---	ND(0.10)	ND(0.010)
OB-09-S	6/3/2002	---	78.5	1.8	1.8
	1/23/2003	190	---	0.08	0.33
	5/12/2003	78	---	ND(0.05)	0.051
	12/15/2003	5.32	---	ND(0.100)	0.0169
	4/23/2004	3.73	---	ND(0.100)	ND(0.0100)
	12/29/2004	43.4	---	ND(0.100)	0.0163
	4/27/2005	16.2	---	0.112	0.0289
	12/30/2005	28.2	---	ND(0.100)	0.0106
	3/27/2006	547	---	0.604	1.1
	10/11/2006	---	---	2.52	1.36
	1/30/2007	72.8	---	40	25.6
	4/10/2007	30.9	---	75.6	21.1
	7/26/2007	42.1	---	4.82	0.887
	11/12/2007	63.2	---	5.08	1.08
	4/21/2008	168	---	8.7	1.88
	7/29/2008	222	---	13.1	3.98
10/22/2008	116	---	17	1.3	
4/9/2009	122	---	16	2	
OB-10-BR	6/3/2002	---	64.4	---	---
	6/3/2002	---	---	0.04	0.19
	1/23/2003	90	---	ND(0.05)	0.042
	5/13/2003	93	---	0.34	0.19
	12/15/2003	82	---	0.403	0.0398
	4/23/2004	87.4	---	ND(0.100)	0.0666
	4/27/2005	69.3	---	---	---
	3/27/2006	55	---	---	---
OB-10-DO	6/3/2002	---	42	---	---
	6/3/2002	---	---	ND(0.01)	0.17
	1/23/2003	37	---	ND(0.05)	0.42
	5/13/2003	29	---	1.2	1.1
	12/15/2003	31.4	---	ND(0.100)	ND(0.0100)
	4/23/2004	32.6	---	ND(0.100)	ND(0.0100)
	4/27/2005	30.6	---	---	---
	3/27/2006	34.1	---	---	---
	11/29/2006	---	---	ND(0.100)	0.351
4/16/2007	38.1	---	ND(0.100)	ND(0.0100)	
OB-10-S	6/3/2002	---	61.6	ND(0.01)	0.022
	1/23/2003	35	---	ND(0.05)	0.007
	5/13/2003	300	---	ND(0.05)	ND(0.005)
	12/15/2003	14.5	---	ND(0.100)	ND(0.0100)
	Dup. 12/15/2003	14	---	ND(0.100)	ND(0.0100)
	4/23/2004	71	---	ND(0.100)	ND(0.0100)
	4/27/2005	124	---	---	---
	3/27/2006	50.1	---	---	---
	11/29/2006	---	---	ND(0.100)	1.28
4/16/2007	39.5	---	ND(0.100)	18.5	

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-11-BR	6/3/2002	---	17	---	---
	6/3/2002	---	---	1.5	0.05
	1/27/2003	7	---	0.31	0.18
	5/12/2003	8	---	1.1	0.2
	12/16/2003	8.89	---	1.99	0.221
	5/1/2004	9.13	---	0.34	0.129
	4/28/2005	9.01	---	---	---
	3/27/2006	10.9	---	---	---
OB-11-DO	6/3/2002	---	5.4	---	---
	6/3/2002	---	---	0.08	0.32
	1/27/2003	19	---	ND(0.05)	0.01
	5/12/2003	12	---	ND(0.05)	0.28
	12/16/2003	16.4	---	1.89	0.21
	5/1/2004	13.2	---	ND(0.100)	ND(0.0100)
	4/28/2005	15	---	---	---
	3/27/2006	18.1	---	---	---
OB-11-S	6/3/2002	---	80	0.16	1.7
	1/27/2003	43	---	ND(0.05)	1.3
	5/12/2003	38	---	1.5	1.9
	12/16/2003	42.6	---	ND(0.100)	1.34
	5/1/2004	38.8	---	1.02	1.24
	4/28/2005	38	---	---	---
	3/27/2006	39	---	---	---
OB-12-BR	6/3/2002	---	12.4	---	---
	6/3/2002	---	---	1.9	0.036
	1/27/2003	12	---	ND(0.05)	0.009
	5/13/2003	14	---	1.5	0.045
	12/16/2003	7970	---	ND(0.500)	3190
	5/13/2004	673	---	126	7270
	4/3/2006	687	---	---	---
	11/29/2006	---	---	ND(0.100)	211
	1/31/2007	4.78	---	---	---
	4/16/2007	1220	---	ND(0.100)	1070
OB-12-DO	6/3/2002	---	10.8	---	---
	6/3/2002	---	---	0.33	0.59
	1/27/2003	69	---	ND(0.05)	0.73
	5/13/2003	52	---	1	0.7
	12/16/2003	181	---	ND(0.100)	243
	5/1/2004	33.5	---	ND(0.100)	4.6
	4/28/2005	38.6	---	---	---
	4/3/2006	58.9	---	---	---
	11/29/2006	---	---	ND(0.100)	1.5
	1/31/2007	104	---	---	---
	4/16/2007	84.9	---	ND(0.100)	6.65
	10/27/2009	116	---	ND(0.50)	1100
	10/26/2011	87.6	---	ND(0.50)	54
OB-12-S	6/3/2002	---	62.1	0.52	0.4
	1/27/2003	42	---	ND(0.05)	0.13
	5/13/2003	38	---	ND(0.05)	0.022
	12/16/2003	178	---	ND(0.100)	684

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-12-S (Cont.)	5/13/2004	385	---	2.29	4170
	4/28/2005	17.7	---	---	---
	4/3/2006	52.6	---	---	---
	11/29/2006	---	---	ND(0.100)	0.14
	1/31/2007	17.8	---	---	---
	4/16/2007	31.7	---	ND(0.100)	0.0656
OB-14-DO	6/3/2002	---	54	---	---
	6/3/2002	---	---	0.04	0.29
	1/23/2003	17	---	0.13	0.5
	5/13/2003	19	---	0.44	0.12
	12/17/2003	15.5	---	0.8	0.32
	5/1/2004	22.2	---	ND(0.100)	0.0573
	4/28/2005	25.3	---	---	---
	3/27/2006	28.1	---	---	---
OB-15-S	6/3/2002	---	78.2	---	---
	6/3/2002	---	---	5.4	26
	1/23/2003	400	---	18	7.1
	5/12/2003	220	---	1.4	2.5
	12/16/2003	47.3	---	ND(0.100)	48.3
	4/23/2004	37	---	ND(0.100)	23.9
	4/27/2005	52.3	---	---	---
	4/3/2006	619	---	---	---
	4/10/2007	92.2	---	---	---
4/25/2008	564	---	---	---	
OB-16-BR	6/3/2002	---	---	0.02	ND(0.005)
	6/11/2002	---	9	---	---
	5/14/2003	85	---	ND(0.05)	ND(0.005)
	12/16/2003	97.7	---	ND(0.100)	ND(0.0100)
	4/27/2004	92.7	---	ND(0.100)	ND(0.0100)
	4/28/2005	90.5	---	---	---
	3/28/2006	93.6	---	---	---
4/10/2007	51.6	---	---	---	
OB-16-S	6/3/2002	---	---	0.03	0.092
	6/11/2002	---	38.7	---	---
	5/14/2003	170	---	0.07	0.11
	12/16/2003	167	---	0.114	ND(0.0100)
	4/27/2004	112	---	ND(0.100)	ND(0.0100)
	4/28/2005	130	---	---	---
	3/28/2006	201	---	---	---
4/10/2007	166	---	---	---	
OB-17-BR	6/3/2002	---	1.9	---	---
	6/3/2002	---	---	1.3	0.011
	5/15/2003	9	---	0.28	0.008
	12/18/2003	10.1	---	0.214	0.0315
	5/2/2004	9.71	---	0.324	0.0358
	5/19/2005	40	---	---	---
	4/7/2006	30.9	---	---	---
OB-17-DO	6/3/2002	---	64.7	---	---
	6/3/2002	---	---	ND(0.01)	0.24
	5/15/2003	ND(1)	---	ND(0.05)	0.069

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-17-DO (Cont.)	12/18/2003	122	---	ND(0.100)	0.255
	5/2/2004	136	---	ND(0.100)	0.105
	5/2/2005	134	---	---	---
	4/7/2006	134	---	---	---
OB-18-DO	8/26/2002	---	25>	5.1	1.4
	5/14/2003	49	---	6.8	1.3
	12/23/2003	23.8	---	ND(0.100)	ND(0.0100)
	5/3/2004	59.1	---	0.911	0.904
	4/29/2005	63.3	---	---	---
	4/7/2006	91.6	---	---	---
OB-18-S  Dup.	8/26/2002	---	25>	15	1.4
	1/28/2003	180	---	0.38	0.83
	5/14/2003	170	---	0.26	2
	12/23/2003	95.1	---	ND(0.100)	1.24
	12/23/2003	91.6	---	ND(0.100)	1.27
	5/3/2004	72.6	---	ND(0.100)	2.06
	4/29/2005	46.2	---	---	---
	4/7/2006	163	---	---	---
OB-19-BR	2/1/2007	158	---	---	---
	6/3/2002	---	104	---	---
	6/3/2002	---	---	0.53	0.02
	1/28/2003	25	---	ND(0.05)	0.4
	5/13/2003	9	---	0.62	0.16
	12/17/2003	2620	---	ND(0.100)	34.7
	4/26/2004	545	---	ND(0.300)	3960
	12/28/2004	1130	---	---	---
	4/28/2005	928	---	---	---
	1/3/2006	238	---	---	---
	3/31/2006	191	---	---	---
	11/29/2006	---	---	ND(0.100)	70.1
	1/31/2007	3.45	---	---	---
4/16/2007	27.1	---	0.753	2.57	
OB-19-DO	6/3/2002	---	19.41	---	---
	6/3/2002	---	---	0.66	1.9
	1/28/2003	900	---	ND(0.1)	8700D
	5/13/2003	20	---	ND(0.05)	14
	12/17/2003	22.8	---	ND(0.100)	2.75
	4/26/2004	20.1	---	ND(0.100)	1.95
	12/28/2004	27.7	---	---	---
	4/28/2005	32.2	---	---	---
	3/31/2006	35.5	---	---	---
	1/31/2007	33.6	---	---	---
	4/11/2007	36.6	---	---	---
	10/13/2010	15.9	--	ND(0.10)	1.1
	4/4/2011	24	---	0.84	2.6
	10/26/2011	34	---	0.78	3.2
4/5/2012	25.8	---	ND(0.10)	5.78	
OB-19-S	6/3/2002	---	62.1	---	---
	1/28/2003	10	---	ND(0.05)	0.023
	5/13/2003	17	---	ND(0.05)	0.009

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-19-S (Cont.)	12/17/2003	15.7	---	0.104	0.0113
	4/26/2004	36.5	---	ND(0.100)	0.0761
	4/28/2005	16.8	---	---	---
	3/28/2006	17.1	---	---	---
OB-20-BR	9/3/2004	0.063	---	ND(0.100)	ND(0.0100)
	1/3/2005	63.2	---	1.51	0.0191
	5/2/2005	54	---	ND(0.100)	0.0146
	1/6/2006	33.4	---	ND(0.100)	0.27
	3/30/2006	33.9	---	ND(0.100)	1080
	2/1/2007	44	---	ND(0.100)	170
	4/12/2007	31.7	---	ND(0.100)	90.6
OB-20-DO	9/3/2004	0.12	---	2.5	0.178
	1/3/2005	15.4	---	ND(0.100)	0.0129
	5/2/2005	7.92	---	ND(0.100)	0.0611
	1/6/2006	55.4	---	ND(0.100)	ND(0.0100)
	3/30/2006	112	---	ND(0.100)	33
	2/1/2007	107	---	ND(0.100)	6.4
	4/12/2007	10.8	---	ND(0.100)	0.314
OB-20-S	9/2/2004	0.06	---	13.5	1.2
	1/3/2005	35.9	---	1.44	0.2
	5/2/2005	24.1	---	ND(0.100)	0.0503
	1/6/2006	71.6	---	0.101	0.171
	3/30/2006	79.5	---	0.257	0.331
	2/1/2007	69.5	---	0.104	0.14
	4/12/2007	52.9	---	ND(0.100)	0.0857
OB-21-BR	9/2/2004	0.096	---	ND(0.100)	ND(0.0100)
	1/3/2005	102	---	ND(0.100)	2.91
	5/2/2005	97.4	---	ND(0.100)	ND(0.0100)
	1/6/2006	124	---	0.106	ND(0.0100)
	3/30/2006	132	---	ND(0.100)	0.0162
	2/1/2007	202	---	ND(0.100)	0.103
	4/12/2007	178	---	0.627	0.176
OB-21-DO	9/2/2004	0.21	---	28.6	3.52
	1/3/2005	177	---	ND(0.100)	2.97
	5/2/2005	227	---	25.5	1.55
	1/6/2006	223	---	ND(0.100)	1.19
	3/30/2006	244	---	4.94	0.764
	2/1/2007	257	---	23.4	1.21
	4/12/2007	254	---	30.6	1.31
OB-22-DO	9/3/2004	0.083	---	1.72	0.558
	1/4/2005	260	---	ND(0.100)	ND(0.0100)
	5/2/2005	4.14	---	0.156	ND(0.0100)
	1/4/2006	365	---	ND(0.100)	ND(0.0100)
	4/7/2006	99.1	---	3.33	0.818
	2/1/2007	11	---	ND(0.100)	ND(0.0100)
	4/15/2007	26.6	---	ND(0.100)	0.0136
OB-23-BR	6/3/2002	---	24.6	---	---
	6/13/2002	---	---	2.8	0.07
OB-24-S	5/14/2003	120	---	3.1	7.2
	12/18/2003	200	---	0.639	0.283

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-24-S (Cont.)	4/27/2004	94.2	---	1.05	3.87
	4/28/2005	71.8	---	---	---
	3/31/2006	49.3	---	---	---
	4/11/2007	45.6	---	---	---
OB-25-BR	12/17/2003	283	---	ND(0.100)	1110
	4/26/2004	8.62	---	ND(0.100)	0.272
	Dup. 4/26/2004	8.74	---	ND(0.100)	0.272
	4/28/2005	11.3	---	---	---
	3/31/2006	81	---	---	---
OB-25-DO	12/17/2003	40	---	ND(0.100)	12.8
	4/26/2004	35.2	---	ND(0.100)	19.5
	4/28/2005	31.7	---	---	---
	3/31/2006	48.1	---	---	---
OB-26-BR	12/17/2003	18	---	16.5	14.9
	4/26/2004	8.49	---	0.136	80.5
	4/28/2005	4.61	---	---	---
	3/31/2006	5.44	---	---	---
OB-26-DO	12/17/2003	19.8	---	ND(0.100)	126
	4/26/2004	24.7	---	ND(0.100)	200
	4/28/2005	23.6	---	---	---
	3/31/2006	95.9	---	---	---
OB-27-BR	12/18/2003	16.1	---	ND(0.100)Z	0.0164
	4/27/2004	21.6	---	ND(0.100)	0.15
	12/28/2004	406	---	ND(0.100)	3570
	4/28/2005	71.5	---	ND(0.100)	214
	1/3/2006	86.3	---	ND(0.100)	606
	3/28/2006	32.6	---	ND(0.100)	0.0214
	1/31/2007	160	---	ND(0.100)	1490
	4/14/2007	136	---	ND(0.100)	806
	11/15/2007	74.5	---	ND(0.100)	7.05
	4/28/2008	57.2	---	ND(0.100)	1.16
	4/22/2010	214	---	1.9	1800
	10/14/2010	421	--	ND(1.0)	4800
	4/14/2011	690	---	5.2	6700
	10/28/2011	94	---	ND(0.50)	300
4/6/2012	273	---	ND(0.50)	2230	
OB-27-DO	12/18/2003	78.6	---	ND(0.100)Z	0.163
	4/27/2004	87.9	---	ND(0.100)	ND(0.0100)
	12/28/2004	89.7	---	ND(0.100)	0.0712
	4/28/2005	156	---	ND(0.100)	ND(0.0100)
	1/3/2006	258	---	ND(0.100)	ND(0.0100)
	3/28/2006	275	---	ND(0.100)	ND(0.0100)
	1/31/2007	330	---	ND(0.100)	ND(0.0100)
	4/10/2007	334	---	ND(0.100)	ND(0.0100)
	11/15/2007	199	---	ND(0.100)	0.258
4/23/2008	448	---	ND(0.100)	ND(0.0100)	
OB-28-BR	12/17/2003	1210	---	ND(0.100)	304
	4/26/2004	29.8	---	ND(0.100)	274
	4/28/2005	53.5	---	---	---
	3/31/2006	47.1	---	---	---

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-28-DO	12/17/2003	844	---	ND(0.100)	718
	4/26/2004	96.8	---	ND(0.300)	2410
	4/28/2005	32.9	---	---	---
	3/31/2006	31	---	---	---
OB-29-DO	8/13/2003	---	---	1.9	1.3
	12/29/2003	148	---	0.746	0.89
	5/3/2004	74.1	---	1.31	1.24
	12/30/2004	86.7	---	ND(0.100)	ND(0.0100)
	4/29/2005	58.2	---	ND(0.100)	0.0192
	3/29/2006	213	---	0.322	1.34
OB-30-DO	5/5/2004	84.8	---	ND(0.100)	ND(0.0100)
	12/29/2004	106	---	---	---
	4/28/2005	125	---	---	---
	1/3/2006	151	---	---	---
	3/28/2006	170	---	---	---
	1/31/2007	160	---	---	---
	4/11/2007	277	---	---	---
OB-32-DO	11/15/2007	289	---	---	---
	5/5/2004	767	---	ND(0.100)	1.09
	12/29/2004	844	---	---	---
	5/2/2005	2900	---	---	---
	1/3/2006	3700	---	---	---
	4/3/2006	1000	---	---	---
	1/31/2007	3920	---	---	---
	4/11/2007	564	---	---	---
	11/15/2007	990	---	---	---
	4/25/2008	1190	---	---	---
	5/8/2008	781	---	---	---
	4/20/2010	74	---	ND(1.0)	540
	10/14/2010	211	--	ND(1.0)	690
	4/14/2011	262	---	ND(1.0)	520
	10/28/2011	175	---	ND(0.50)	290
4/5/2012	204	---	ND(0.20)	190	
OB-33-DO	5/5/2004	49.7	---	0.138	0.646
	12/29/2004	7.54	---	---	---
	4/28/2005	17.8	---	---	---
	12/29/2005	4.72	---	---	---
	3/28/2006	12.5	---	---	---
	1/31/2007	7.55	---	---	---
	4/14/2007	11.4	---	---	---
	11/13/2007	7.2	---	---	---
4/23/2008	11.8	---	---	---	
OB-34-DO	5/5/2004	16	---	ND(0.100)	ND(0.0100)
	Dup. 5/5/2004	16.5	---	ND(0.100)	ND(0.0100)
	12/29/2004	57	---	---	---
	5/2/2005	39.9	---	---	---
	1/3/2006	88	---	---	---
	3/28/2006	68.8	---	---	---
	1/31/2007	35.8	---	---	---
10/27/2009	38.7	---	---	ND(0.50)	10



**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-35-DO	12/28/2004	82.6	---	4.6	0.0926
	5/3/2005	72.6	---	ND(0.100)	ND(0.0100)
	1/3/2006	80.1	---	ND(0.100)	39.5
	4/7/2006	276	---	ND(0.100)	ND(0.0100)
	2/5/2007	88.8	---	ND(0.100)	7.11
	4/13/2007	115	---	ND(0.100)	157
	11/15/2007	373	---	ND(0.100)	260
	4/25/2008	79.5	---	ND(0.100)	ND(0.0100)
	10/23/2008	392	---	ND(1.00)	249
	4/9/2009	79.1	---	ND(0.10)	0.03
	10/28/2009	328	---	ND(0.10)	ND(0.010)
	4/22/2010	73.2	---	ND(0.10)	0.2
	10/14/2010	193	--	ND(0.10)	0.074
	4/7/2011	112J	---	ND(0.10)	0.023
10/27/2011	84.3	---	ND(0.10)	0.066	
4/6/2012	78.4	---	ND(0.10)	0.028	
OB-36-DO	2/2/2004	7.91	---	---	---
	5/4/2004	7.68	---	ND(0.100)	0.635
	Dup. 5/4/2004	7.44	---	ND(0.100)	0.627
	12/28/2004	117	---	---	---
	5/3/2005	445	---	---	---
	1/3/2006	284	---	---	---
	4/7/2006	42.2	---	---	---
	2/5/2007	40.8	---	---	---
	4/13/2007	15.3	---	---	---
	11/15/2007	11.5	---	---	---
	4/25/2008	---	---	18.9	15.3
5/8/2008	9.54	---	---	---	
OB-37-DO	2/2/2004	20.9	---	---	---
	5/4/2004	2.53	---	ND(0.100)	0.18
	12/28/2004	7.18	---	---	---
	5/3/2005	3.15	---	ND(0.100)	0.0939
	1/3/2006	7.64	---	---	---
	4/7/2006	10.4	---	ND(0.100)	0.205
	2/5/2007	29.4	---	0.128	25.2
	4/13/2007	15.6	---	ND(0.100)	18.1
	11/15/2007	ND(1000)	---	ND(1.00)	21500
	4/25/2008	417	---	15.2	74.6
	5/7/2010	47.3	---	ND(1.0)	63
	10/13/2010	621	--	ND(1.0)	3800
	4/7/2011	10800J	---	11	18000
	10/28/2011	890	---	ND(10)	15000
4/6/2012	438	---	ND(1.5)	3210	
OB-38-DO	12/28/2004	384	---	ND(0.100)	ND(0.0100)
	4/27/2005	24	---	0.129	0.0162
	1/3/2006	3320	---	ND(0.100)	ND(0.0100)
	3/28/2006	677	---	0.138	0.96
	1/31/2007	1080	---	ND(0.100)	0.459
	4/10/2007	146	---	ND(0.100)	ND(0.0100)
	11/16/2007	1.39	---	ND(0.100)	ND(0.0100)

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
OB-38-DO (Cont.)	4/25/2008	771	---	ND(0.100)	0.472
	10/22/2008	12.2	---	ND(0.100)	0.0256
	4/9/2009	459	---	ND(0.10)	0.14
	10/28/2009	31.7	---	ND(0.10)	0.025
OB-39-DO	12/28/2004	15.8	---	ND(0.100)	ND(0.0100)
	4/27/2005	18.1	---	ND(0.100)	ND(0.0100)
	1/6/2006	15.6	---	ND(0.100)	ND(0.0100)
	3/28/2006	16.1	---	ND(0.100)	0.0857
	1/31/2007	9.12	---	ND(0.100)	ND(0.0100)
	4/10/2007	12	---	ND(0.100)	ND(0.0100)
	11/14/2007	15.1	---	ND(0.100)	0.0109
	4/25/2008	12.7	---	ND(0.100)	0.0153
	10/22/2008	12.4	---	ND(0.100)	0.0337
	4/9/2009	15.5	---	ND(0.10)	ND(0.010)
OB-40-DO	12/28/2004	36	---	ND(0.100)	ND(0.0100)
	4/27/2005	27.8	---	ND(0.100)	ND(0.0100)
	12/29/2005	26.6	---	ND(0.100)	ND(0.0100)
	3/28/2006	34.9	---	ND(0.100)	ND(0.0100)
	1/31/2007	41	---	ND(0.100)	ND(0.0100)
	4/10/2007	36.4	---	ND(0.100)	ND(0.0100)
	11/14/2007	63.1	---	ND(0.100)	ND(0.0100)
	4/25/2008	38.4	---	ND(0.100)	0.0303
	10/22/2008	55.1	---	ND(0.100)	ND(0.0100)
4/9/2009	48.2	---	ND(0.10)	ND(0.010)	
P-14	6/3/2002	---	1.9	---	---
	5/3/2004	1400	---	ND(0.100)	0.0614
P-19A	1/3/2005	97.6	---	---	---
	5/2/2005	104	---	---	---
	1/6/2006	159	---	---	---
	3/30/2006	144	---	---	---
	2/1/2007	117	---	---	---
P-20R	1/6/2006	10.7	---	ND(0.100)	0.0807
	3/30/2006	27.5	---	ND(0.100)	0.372
	2/1/2007	84	---	0.15	1.24
P-21	1/3/2005	1000	---	12.6	1.16
	5/2/2005	1580	---	---	---
	1/4/2006	4070	---	---	---
	4/7/2006	257	---	---	---
	2/1/2007	606	---	---	---
P-24	1/3/2005	69.4	---	ND(0.100)	ND(0.0100)
	5/2/2005	21.3	---	ND(0.100)	ND(0.0100)
	1/6/2006	65.4	---	ND(0.100)	ND(0.0100)
	3/30/2006	36.3	---	ND(0.100)	0.0135
	2/5/2007	20.6	---	ND(0.100)	ND(0.0100)
RW-01_MW-18	6/3/2002	---	108.8	---	---
	6/3/2002	---	---	2.2	1.3
	2/17/2003	80	---	ND(0.1)	83
	5/13/2003	600	---	0.1	6000
	12/16/2003	613	---	ND(0.100)	1330
	5/13/2004	240	---	30.9	1430
	5/2/2005	56.9	---	---	---
4/3/2006	933	---	---	---	

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
RW-02	6/3/2002	---	60.4	---	---
	6/3/2002	---	---	0.21	3
	2/17/2003	500	---	ND(0.1)	29000
	5/14/2003	380	---	ND(0.05)	12000
	12/16/2003	422	---	ND(0.100)N	1380N
	Dup. 12/16/2003	426	---	ND(0.100)	1380
	5/2/2004	456	---	ND(1.00)	7670
3/31/2006	603	---	---	---	
RW-03	6/3/2002	---	67.2	---	---
	6/3/2002	---	---	0.11	0.26
	2/20/2003	44	---	ND(0.05)	3.1
	5/13/2003	30	---	ND(0.05)	210
	12/16/2003	22.8	---	6.94	29.2
	5/2/2004	12.6	---	ND(0.100)	0.0905
	5/2/2005	16.8	---	---	---
4/3/2006	136	---	---	---	
RW-04	6/3/2002	---	17.3	---	---
	6/3/2002	---	---	ND(0.01)	0.063
	1/29/2003	73	---	ND(0.05)	0.24
	5/13/2003	ND(1)	---	ND(0.05)	2.6
	12/15/2003	15.3	---	ND(0.100)	119
	4/27/2004	4.03	---	ND(0.100)	11.5
	4/29/2005	5.83	---	---	---
3/31/2006	66.5	---	---	---	
RW-05	6/3/2002	---	19.6	---	---
	6/3/2002	---	---	0.12	0.23
	1/29/2003	90	---	ND(0.05)	11
	5/13/2003	ND(1)	---	ND(0.05)	0.98
	12/15/2003	14.7	---	ND(0.100)	117
	5/2/2004	101	---	ND(0.100)	0.237
	4/27/2005	106	---	---	---
4/3/2006	296	---	---	---	
RW-17_MW-17	6/3/2002	---	69.1	---	---
	6/3/2002	---	---	0.57	0.11
	2/20/2003	180	---	ND(0.1)	41
	5/13/2003	3	---	ND(0.05)	66
	4/27/2004	20.7	---	ND(0.100)	9.82
	4/29/2005	243	---	---	---
	3/31/2006	30.1	---	---	---
RW-19	6/3/2002	---	9.7	---	---
	6/3/2002	---	---	0.03	0.06
	1/29/2003	140	---	ND(0.1)	720D
	5/15/2003	130	---	ND(0.05)	3600
	12/18/2003	9.9	---	0.304	0.64
	5/1/2004	598	---	ND(0.300)	1550
	5/13/2004	373	---	31	345
	4/29/2005	26.9	---	---	---
3/28/2006	28.2	---	---	---	

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
RW-20	6/3/2002	---	42.4	---	---
	6/3/2002	---	---	1.1	0.34
	1/29/2003	100	---	0.56	0.24
	5/15/2003	120	---	2.6	0.35
	12/18/2003	9	---	0.144	0.758
	5/1/2004	180	---	0.512	7.14
	4/29/2005	132	---	---	---
	3/29/2006	349	---	---	---
RW-21	6/3/2002	---	8.3	---	---
	6/3/2002	---	---	4.4	0.32
	1/29/2003	280	---	2.4	0.44
	5/15/2003	10	---	1.7	17
	12/18/2003	10.5	---	0.418	0.487
	5/1/2004	49.4	---	0.104	0.66
	4/29/2005	43.3	---	---	---
	3/29/2006	38.6	---	---	---
RW-22	6/3/2002	---	18.6	---	---
	6/3/2002	---	---	1.4	0.038
	1/23/2003	23	---	ND(0.05)	ND(0.005)
	5/13/2003	10	---	ND(0.05)	ND(0.005)
	12/17/2003	12.2	---	ND(0.100)	ND(0.0100)
	5/1/2004	14.8	---	ND(0.100)	0.0277
	4/28/2005	14.9	---	---	---
	3/27/2006	17.1	---	---	---
STR-03	11/29/2006	---	---	1.88	1.23
	3/1/2007	---	---	5.15	1.11
	4/16/2007	461	---	1.82	0.817
	11/16/2007	9.85	---	0.371	0.0596
	1/23/2008	1130	---	8.87	6.07
	4/21/2008	900	---	0.324	0.137
	7/29/2008	1170	---	2.45	0.732
	10/22/2008	1340	---	31.6	13.6
	1/13/2009	1790	---	1.4	0.58
4/9/2009	1320	---	3.5	2.6	
STRHA-02	2/1/2007	---	---	---	1.36
	1/29/2003	---	---	---	1.6
	5/15/2003	---	---	---	3.1
	12/22/2003	---	---	---	2.28
	4/27/2004	---	---	11.4	1.9
	12/30/2004	---	---	---	3.04
	4/29/2005	---	---	18.4	2.98
	1/4/2006	---	---	---	3.31
	4/3/2006	---	---	---	4.8
	2/1/2007	---	---	---	1.26
STRM-A-SCDS	9/15/2004	161	---	2.07	0.924
	1/3/2005	187	---	1.46	0.326
	5/19/2005	124	---	2.14	0.536
	1/6/2006	178	---	1.7	0.516
	3/30/2006	148	---	1.18	0.732
	4/12/2007	124	---	1.48	0.465

**TABLE 7**  
**Water Quality Data - Chloride, Dissolved Iron and Dissolved Manganese Results**

Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

SITE ID	DATE	Chloride Total (mg/l)	Chloride Field (mg/l)	Iron Dissolved (mg/l)	Manganese Dissolved (mg/l)
STRMH-02	1/29/2003	---	---	---	1.7
	5/15/2003	---	---	---	3.1
	5/4/2004	---	---	10	1.76
	1/4/2005	---	---	---	1.32
	4/29/2005	---	---	17.9	2.9
	1/4/2006	---	---	---	0.0616
	4/3/2006	---	---	---	4.98
	4/15/2007	---	---	---	1.28
STRMH-03	4/15/2007	---	---	---	1.29
UNNAMED_STREAM	7/2/2003	---	---	---	12
	12/23/2003	---	---	48.9	9.48
	5/4/2004	---	---	0.275	0.192
	12/29/2004	---	---	13.6	9.25
	5/3/2005	---	---	---	9.12
	1/3/2006	---	---	---	9.96
	4/3/2006	---	---	---	9.05
	10/11/2006	---	---	0.237	0.0536
	11/29/2006	---	---	46.1	7.31
	2/1/2007	---	---	---	7.48
	3/1/2007	---	---	0.186	---
	4/16/2007	380	---	4.92	1.63
	11/16/2007	21.7	---	1.42	0.197
	1/23/2008	861	---	22.6	5.22
	4/21/2008	1710	---	64.6	10.3
	7/29/2008	1640	---	78.6	8.54
10/21/2008	175	---	76.4	11	
1/14/2009	1460	---	48	6.9	
4/9/2009	1170	---	22	6.1	
MW-2_32-TOZER	11/8/2011	489	---	2.58	---

**Notes:**

mg/l = milligrams per liter

--- = not collected

ND(0.05) = non detect (method detection limit)

25> = Result higher than the test kit range

N = matrix interference

Dup. = Duplicate sample

NA = Not Applicable, or sample not collected at a discrete well depth

Z = Sample results switched in May 7, 2004 status report.

D = Result reported and from a dilute sample

**TABLE 8**  
**Water Quality Data**  
**BIOREMEDIATION PARAMETERS**

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

CONSTITUENT	UNITS	AP-13-DO 7/26/2007	AP-13-DO 7/31/2007	AP-13-DO 11/12/2007	AP-13-DO 1/23/2008	AP-13-DO 4/21/2008	AP-13-DO 7/28/2008	AP-13-DO 10/22/2008	AP-13-DO 1/14/2009	AP-13-DO 4/2/2009	AP-13-DO 4/22/2010	AP-13-DO 7/14/2010	AP-13-DO 10/12/2010	AP-13-DO 1/4/2011	AP-13-DO 4/5/2011	AP-13-DO 7/28/2011	AP-13-DO 10/25/2011
<b>Dissolved Metals</b>																	
Iron	mg/L	0.142	---	217	9.41	1.5	11.9	0.124	0.26	0.2	---	---	---	---	---	---	---
Manganese	mg/L	1.5	---	291	76.3	33.6	5.91	5.98	9.27	13	---	---	---	---	---	---	---
<b>Metabolic Acids</b>																	
Acetic acid	mg/L	120	---	1500	2400	2500	2400	2200	78	180	460	630J	980	2500	1600	2700	2500
Lactic Acid	mg/L	<10	---	200000D	61000D	36000	15000	17000	<1.0	<1.0	<5.0	<10J	360	16000	930	35000	6300
n-Butanoic acid	mg/L	<20	---	<200	<200	<400	<200	<200	<2.0	6.3	<10	<20J	18	<200	68	<400	<100
Propionic acid	mg/L	170	---	<100	<100	<200	<100	<100	26	48	74	85J	150	220	93	270	210
Pyruvic Acid	mg/L	<5.0	---	470	250	140	75	120	<0.50	<0.50	<2.5	<5.0J	14	<50	7.7	<100	<25
<b>Miscellaneous Analyses</b>																	
Methane	ug/L	<2.0	---	<2.0	11	4.7	5.2	7	<2.0	2.8	83	18J	6.6	5.4	2.7	8.6	3.6
Ethane	ug/L	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0J	<1.0	<1.0	<1.0	1.5	<1.0
Ethene	ug/L	<1.0	---	<1.0	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	17	5.6J	17	21	5	71	35
Chloride	mg/L	4970	---	790	1980	2350	2290	1480	150	273	---	---	---	---	---	---	---
TOC	mg/L	91.6	---	56300	24400	12500	6500	5890	65.1	106	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	1.0 x 10 <sup>4</sup>	---	2.2 x 10 <sup>2</sup>	2.4 x 10 <sup>4</sup>	---	1.0 x 10 <sup>4</sup>	3.8 x 10 <sup>5</sup>	7.4 x 10 <sup>3</sup>	<7.7 x 10 <sup>1</sup>	1.2 X 10 <sup>6</sup>	4.4 x 10 <sup>4</sup>	1.1 x 10 <sup>5</sup>	4.0 x 10 <sup>4</sup>	1.2 x 10 <sup>4</sup>	6.3 x 10 <sup>1</sup> J	7.1 x 10 <sup>2</sup>
Dehalococcoides sp.	(1)	---	---	---	---	Neg	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	3.56 x 10 <sup>1</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	4.3 x 10 <sup>1</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																	
pH	--	---	---	9.11	7.00	9.21	8.67	8.93	8.15	8.83	---	7.81	7.19	7.28	7.17	---	---
ORP	mV	---	---	-94	109	-36.2	20.8	-82.5	-170	-153.5	---	-32	-71	-181.9	-354	---	---
Dissolved Oxygen	mg/L	---	---	0.17	0.73	0.14	0.32	0.41	0.32	0.44	---	0.39	0.22	0.79	0.43	---	---
Specific Conductivity	ms/cm	---	---	39.66	21.34	17.6	14.61	13	8.547	12.369	---	9.527	9.191	11.269	9.699	---	---

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
 N = Matrix interference  
 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococcoides are present  
 Neg = results do not indicate active Dehalococcoides are present  
 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
 (3) = results from biotrap analysis by Shaw (cells/grams of beads)  
 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

CONSTITUENT	UNITS	AP-13-DO 1/17/2012	AP-13-DO 4/3/2012	AP-23-DO 11/12/2007	AP-23-DO 1/23/2008	AP-23-DO 4/21/2008	AP-23-DO 7/28/2008	AP-23-DO 10/22/2008	AP-23-DO 1/14/2009	AP-23-DO 4/2/2009	AP-23-DO 1/28/2010	AP-23-DO 4/22/2010	AP-23-DO 7/14/2010	AP-23-DO 10/12/2010	AP-23-DO 1/4/2011	AP-23-DO 4/5/2011
<b>Dissolved Metals</b>																
Iron	mg/L	---	---	12.3	14.4	2.01	0.78	136	1.73	3.2	---	---	---	---	---	---
Manganese	mg/L	---	---	30.8	51.8	31.5	23.9	181	6.44	19	---	---	---	---	---	---
<b>Metabolic Acids</b>																
Acetic acid	mg/L	1300	1200	470	1600D	390	28	560	220	290	28	320	260J	620	2800	2000
Lactic Acid	mg/L	740	290	20000D	340D	22	2.9	1700	6.1	33	5.7	15	<10J	<10	20000	11000
n-Butanoic acid	mg/L	<40	20	<100	390D	110	6.9	50	36	77	3.1	22	41J	240	<400	1200
Propionic acid	mg/L	41	16	890	3100D	750	35	1300	500	670D	41	770	620J	1100	5200	3100
Pyruvic Acid	mg/L	<10	<5.0	110	19	<5.0	<0.50	<5.0	<2.5	<0.50	<0.50	<2.5	<5.0J	<5.0	430	<50
<b>Miscellaneous Analyses</b>																
Methane	ug/L	3	2.3	5.4	6.4	2.7	2.4	4.5	3.9	36	27	14	19J	700D	200	240
Ethane	ug/L	<1.0	<1.0	2.1	3.3	4.3	4.9	6.2	2.2	2.1	<2.0	<1.0	<1.0J	2.5	<10	<10
Ethene	ug/L	7.8	3.3	6.3	7	10	14	30	22	36	170	65	65J	310D	2500D	640
Chloride	mg/L	---	---	78	56.2	64.7	35.8	13.9	43.6	60.7	---	---	---	---	---	---
TOC	mg/L	---	---	8840	1.84	546	40	1250	324	417	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	<2.8 x 10 <sup>1</sup>	<4.2 x 10 <sup>1</sup>	5.4 x 10 <sup>2</sup>	1.9 x 10 <sup>3</sup>	---	6.1 x 10 <sup>4</sup>	4.6 x 10 <sup>4</sup>	3.1 x 10 <sup>6</sup>	4.5 x 10 <sup>4</sup>	3.5 x 10 <sup>4</sup>	1.0 X 10 <sup>5</sup>	3.6 X 10 <sup>4</sup>	7.1 x 10 <sup>5</sup>	6.0 x 10 <sup>4</sup>	3.7 x 10 <sup>5</sup>
Dehalococcoides sp.	(1)	---	---	---	---	Pos	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																
pH	---	---	---	6.5	6.04	6.92	6.49	7.91	7.66	8.1	8.31	8.44	7.3	7.28	6.52	7.2
ORP	mV	---	---	-33	155	74.9	28.8	75.6	54.3	-36.3	-231	-390	-156	-200	-348.6	-360
Dissolved Oxygen	mg/L	---	---	0.27	4.70	0.49	0.82	0.21	0.92	0.65	0.2	0.16	0.43	0.21	0.21	0.35
Specific Conductivity	ms/cm	---	---	14.09	25.5	19.75	19.78	29.73	28.13	25.632	20.055	19.235	16.707	17.112	16.25	16.20

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
 N = Matrix interference  
 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococcoides are present  
 Neg = results do not indicate active Dehalococcoides are present  
 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
 (3) = results from biotrap analysis by Shaw (cells/grams of beads)  
 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

CONSTITUENT	UNITS	AP-23-DO 7/28/2011	AP-23-DO 10/25/2011	AP-23-DO 1/17/2012	AP-23-DO 4/3/2012	AP-24-DO 10/11/2006	AP-24-DO 1/30/2007	AP-24-DO 4/10/2007	AP-24-DO 7/20/2007	AP-24-DO 7/31/2007	AP-24-DO 8/9/2007	AP-24-DO 11/12/2007	AP-24-DO 1/23/2008	AP-24-DO 4/21/2008	AP-24-DO 7/28/2008	AP-24-DO 10/22/2008
<b>Dissolved Metals</b>																
Iron	mg/L	---	---	---	---	4.79	28	0.346	---	---	<0.100	10.4	61.5	12.4	5.52	26.9
Manganese	mg/L	---	---	---	---	4430	104	3.17	---	---	16.6	33.7	143	48.9	28.4	59.5
<b>Metabolic Acids</b>																
Acetic acid	mg/L	920	220	26	190	<5.0	4000	270	---	---	850N	460	2600	1800	2000	130
Lactic Acid	mg/L	150	5.5	6	4.1	<5.0	49000	1600	---	---	<10	20000D	54000D	23000	17000	850
n-Butanoic acid	mg/L	140	25	<2.0	17	<10	<800	<100	---	---	110	<100	<200	<500	<200	<10
Propionic acid	mg/L	1800	390	42	290	<5.0	<400	<50	---	---	340	630	<100	<250	<100	120
Pyruvic Acid	mg/L	19	<1.0	<0.50	<1.0	<2.5	330	<25	---	---	<5.0	<25	150	<130	<50	2.6
<b>Miscellaneous Analyses</b>																
Methane	ug/L	340	120	26	130	<2.0	5.9	5.9	---	---	<2.0	<2.0	9.5	9.5	13	34
Ethane	ug/L	<10U	<2.0	<2.0	<4.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Ethene	ug/L	500	65	230D	510D	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	<1.0	<1.0	1	1
Chloride	mg/L	---	---	---	---	---	778	550	---	---	267	93.2	375	611	411	111
TOC	mg/L	---	---	---	---	5.77	17800	2880	---	---	566	5770	15600	7740	6410	302
Dehalococcoides sp.	cells/ml	2.1 x 10 <sup>4</sup>	2.7 x 10 <sup>6</sup>	5.5 x 10 <sup>5</sup>	1.4 x 10 <sup>7</sup>	<3.3x10 <sup>2</sup>	1.9x10 <sup>5</sup>	3.4x10 <sup>4</sup>	<1.0 x 10 <sup>1</sup>	---	---	6.4 x 10 <sup>2</sup>	<1.0 x 10 <sup>1</sup>	---	8.7 x 10 <sup>3</sup>	3.7 x 10 <sup>5</sup>
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	Pos	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	6.26 X 10 <sup>3</sup>	---	---	---	---	---	---
Mn Degradars	(3)	---	---	---	---	---	---	---	---	1.10 X 10 <sup>6</sup>	---	---	---	---	---	---
<b>Field Parameters</b>																
pH	---	---	---	---	---	---	7.83	8.93	7.9	---	7.85	6.3	6.63	8.05	7.91	7.54
ORP	mV	---	---	---	---	---	98.7	-153.3	103	---	-100	-37	130	-72.2	41.6	-218.8
Dissolved Oxygen	mg/L	---	---	---	---	---	0.57	0.84	0.64	---	0.77	0.37	0.46	0.2	0.57	0.22
Specific Conductivity	ms/cm	---	---	---	---	---	22.54	13.88	7.518	---	8.662	9.161	18.85	12.68	12.49	19.54

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
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 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococcoides are present  
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 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
 (3) = results from biotrap analysis by Shaw (cells/grams of beads)  
 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration



**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

CONSTITUENT	UNITS	AP-24-DO 1/14/2009	AP-24-DO 4/2/2009	AP-24-DO 1/28/2010	AP-24-DO 4/22/2010	AP-24-DO 7/14/2010	AP-24-DO 10/12/2010	AP-24-DO 1/4/2011	AP-24-DO 4/5/2011	AP-24-DO 7/28/2011	AP-24-DO 10/25/2011	AP-24-DO 4/3/2012	AP-25-DO 10/11/2006	AP-25-DO 1/30/2007	AP-25-DO 4/10/2007	AP-25-DO 7/20/2007	AP-25-DO 7/31/2007
<b>Dissolved Metals</b>																	
Iron	mg/L	0.48	0.25	---	---	---	---	---	---	---	---	---	1.98	15.2	<0.100	---	---
Manganese	mg/L	7.46	11	---	---	---	---	---	---	---	---	---	1300	42.8	2.74	---	---
<b>Metabolic Acids</b>																	
Acetic acid	mg/L	440	780D	73	260	190J	480	2500	480	280	780	380	100	<200	100	---	---
Lactic Acid	mg/L	<10	4600D	4.8	340	<1.0J	<5.0	11000	33	20000	750	<5.0	<5.0	27000	34	---	---
n-Butanoic acid	mg/L	53	130	11	21	16J	15	250	120	<400U	710	54	<10	<400	6.3	---	---
Propionic acid	mg/L	930	1200D	48	330	200J	340	4900	740	<200U	1600	420	<5.0	<200	170	---	---
Pyruvic Acid	mg/L	<5.0	2.5	<0.50	<1.0	<0.50J	<2.5	89	<5.0	<100U	6.5	<2.5	<2.5	<100	<0.50	---	---
<b>Miscellaneous Analyses</b>																	
Methane	ug/L	59	110	<4.0	<20	<20J	<50	<100	<100	<40U	<8.0	<8.0	<2.0	11	<2.0	---	---
Ethane	ug/L	<1.0	<2.0	<2.0	<10	<10J	<25	<50	<50	<20U	<4.0	<4.0	<1.0	<1.0	<1.0	---	---
Ethene	ug/L	1.6	3.9	160	680	1900DJ	4600D	4500	2600	1400	300	5100D	<1.0	4.4	1	---	---
Chloride	mg/L	117	283	---	---	---	---	---	---	---	---	---	---	170	15.6	---	---
TOC	mg/L	629	1950	---	---	---	---	---	---	---	---	---	46.5	7470	137	---	---
Dehalococcoides sp.	cells/ml	3.2 x 10 <sup>4</sup>	6.2 x 10 <sup>3</sup>	5.1 x 10 <sup>4</sup>	2.1 X 10 <sup>5</sup>	8.8 X 10 <sup>4</sup>	1.8 x 10 <sup>5</sup>	1.5 x 10 <sup>5</sup>	1.8 x 10 <sup>5</sup>	8.0 x 10 <sup>3</sup>	3.4 x 10 <sup>4</sup>	2.2 x 10 <sup>7</sup>	<3.3x10 <sup>2</sup>	8.0x10 <sup>5</sup>	3.7x10 <sup>3</sup>	6.0 x 10 <sup>4</sup>	---
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	6.57x10 <sup>5</sup>
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	7.40x10 <sup>5</sup>
<b>Field Parameters</b>																	
pH	--	7.83	7.74	8.38	8.05	7.29	7.1	6.35	7.27	---	---	---	---	7.7	6.74	6.99	---
ORP	mV	-238.3	-92.7	-223	-195	-33	-191	-133.1	-360	---	---	---	---	-57.4	-145.4	-140	---
Dissolved Oxygen	mg/L	0.28	0.69	0.32	0.49	0.41	0.39	0.39	0.59	---	---	---	---	0.92	0.78	0.85	---
Specific Conductivity	ms/cm	14.33	8.644	3.816	3.262	3.473	3.415	12.112	3.542	---	---	---	---	18.85	1.901	2.218	---

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
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 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

CONSTITUENT	UNITS	AP-25-DO 8/9/2007	AP-25-DO 11/12/2007	AP-25-DO 1/23/2008	AP-25-DO 4/21/2008	AP-25-DO 7/28/2008	AP-25-DO 10/22/2008	AP-25-DO 1/14/2009	AP-25-DO 4/2/2009	AP-25-DO 1/28/2010	AP-25-DO 1/4/2011	AP-25-DO 4/5/2011	BW-01 11/29/2006	BW-01 4/10/2007	BW-01 7/19/2007	BW-01 11/12/2007	BW-01 1/24/2008
<b>Dissolved Metals</b>																	
Iron	mg/L	<0.100	<0.100	0.284	0.804	<0.100	0.589	0.28	<0.10	---	---	---	<0.100	36.5	32	7.57	24.5
Manganese	mg/L	0.0692	0.146	0.633	2.12	<0.0100	1.06	0.243	0.11	---	---	---	0.0282	10.7	22.4	5.71	4.47
<b>Metabolic Acids</b>																	
Acetic acid	mg/L	<1.0	1.7	75	240	2.2	200	24	59	<1.0	8.2	---	<1.0	130	780	6	13
Lactic Acid	mg/L	<1.0	1	120	<2.0	<1.0	19	<1.0	1.9	<1.0	<1.0	---	<1.0	<2.0	<10	<1.0	1.5
n-Butanoic acid	mg/L	<2.0	<2.0	2.4	5.9	<2.0	4.5	<2.0	<2.0	<2.0	<2.0	---	<2.0	28	250	<2.0	<2.0
Propionic acid	mg/L	<1.0	3.4	67	300	<1.0	160	5.8	15	<1.0	<1.0	---	<1.0	210	530	1.4	3.3
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<1.0	<0.50	0.66	<0.50	<0.50	<0.50	<0.50	---	<0.50	<1.0	<5.0	<0.50	<0.50
<b>Miscellaneous Analyses</b>																	
Methane	ug/L	<2.0	<2.0	6	<100	<100	30	<10	57	16	130D	---	16	590	8100	1600	2300
Ethane	ug/L	<1.0	<1.0	<2.5	<50	<50	<1.0	<5.0	<20	<1.0	<1.0	---	<1.0	<10	<100	<20	<40
Ethene	ug/L	<1.0	2.6	200	2400	4500	6300D	440	1100	18	320D	---	<1.0	<10	<100	<20	<40
Chloride	mg/L	<2.00	3.61	19.7	96.8	<2.00	150	34.9	61.1	---	---	---	---	96.1	83.4	18	97.1
TOC	mg/L	6.08	5.15	100	105	4.57	164	19.3	32.2	---	---	---	1.4	205	1210	7.75	11.9
Dehalococoides sp.	cells/ml	---	1.5x10 <sup>3</sup>	1.9x10 <sup>3</sup>	---	<2.5x10 <sup>1</sup>	<5.4x10 <sup>1</sup>	9.5 x 10 <sup>5</sup>	2.3 x 10 <sup>4</sup>	2.6 x 10 <sup>4</sup>	1.1 x 10 <sup>4</sup>	---	---	<8.3 x 10 <sup>1</sup>	<3.3 x 10 <sup>3</sup> D	1.4 x 10 <sup>3</sup>	<1.0 x 10 <sup>1</sup>
Dehalococoides sp.	(1)	---	---	---	Neg	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																	
pH	--	7.16	7.47	6.64	7.19	6.93	7.12	7.03	8.17	8.04	7.62	10.02	5.72	6.89	7.72	6.76	5.92
ORP	mV	-105	-90	-92	-116.8	-88.9	-151.2	-110.3	-133.5	-165	-175.9	-351	179.6	-90.3	-168.2	-110	-90
Dissolved Oxygen	mg/L	0.45	0.28	0.24	0.16	0.3	0.3	0.2	0.22	0.13	0.38	0.8	2.05	0.92	0.5	0.02	0.80
Specific Conductivity	ms/cm	1.984	0.134	0.430	1.185	1.052	1.891	0.357	0.495	0.185	0.271	0.116	0.163	0.853	2.347	0.373	0.500

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
 N = Matrix interference  
 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococoides are present  
 Neg = results do not indicate active Dehalococoides are present  
 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
 (3) = results from biotrap analysis by Shaw (cells/grams of beads)  
 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

CONSTITUENT	UNITS	BW-01 4/21/2008	BW-01 7/28/2008	BW-01 10/22/2008	BW-01 1/13/2009	BW-01 4/2/2009	BW-01 7/14/2009	BW-01 10/27/2009	BW-01 1/28/2010	BW-01 4/22/2010	BW-01 10/28/2011	BW-01 8/20/2012	BW-02 10/11/2006	BW-02 1/30/2007	BW-02 4/10/2007	BW-02 7/19/2007	BW-02 11/12/2007
<b>Dissolved Metals</b>																	
Iron	mg/L	12.5	<0.100	2.86	2.1	3.8	---	---	---	---	---	---	0.123	107	61.1	14.8	19
Manganese	mg/L	2.82	1.04	3.82	2.27	3.2	---	---	---	---	---	---	35.1	50.8	17.1	8.14	7
<b>Metabolic Acids</b>																	
Acetic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	570	98	220	61
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	840	<1.0	<2.0	<1.0
n-Butanoic acid	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	---	---	<2.0	21	30	<4.0	<2.0
Propionic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	990	170	24	18
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	<0.50	7.7	<0.50	<1.0	<0.50
<b>Miscellaneous Analyses</b>																	
Methane	ug/L	2400	51	1200D	1700	260	170	77	54	1300	---	---	8.6	1200	780	5000	2300
Ethane	ug/L	<50	<1.0	<1.0	<20U	<5.0	<2.0	<1.0	<1.0	<25	---	---	<1.0	<20	<10	<100	<40
Ethene	ug/L	<50	<1.0	<1.0	<20U	<5.0	<2.0	<1.0	<1.0	<25	---	---	<1.0	<20	<10	<100	<40
Chloride	mg/L	73	48.1	35.5	86.1	67.3	---	---	---	---	---	---	---	51.9	282	77.3	21
TOC	mg/L	4.99	3.04	3.87	2.4	1.6	---	---	---	---	---	---	6.96	876	187	151	36.8
Dehalococcoides sp.	cells/ml	$3.2 \times 10^3$	$<2.2 \times 10^1$	$<2.7 \times 10^1$	$5.7 \times 10^2$	$1.2 \times 10^4$	$3.2 \times 10^3$	$1.1 \times 10^4$	$7.8 \times 10^3$	$8.6 \times 10^3$	---	---	$<2.5 \times 10^1$	$3.7 \times 10^3$	$<6.3 \times 10^1$	---	$1.2 \times 10^3$
Dehalococcoides sp.	(1)	Neg	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degradors	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																	
pH	---	---	6.11	6.5	6.15	6.46	6.01	6.21	---	---	6.81	5.35	7.06	6.69	7.01	7.04	6.97
ORP	mV	---	-58.5	-57.9	-45.5	35.3	59	-0.8	---	---	-107	-49.2	143.6	-164.9	-139.1	-198.5	-145
Dissolved Oxygen	mg/L	---	0.21	0.37	0.29	5.5	0.27	0.17	---	---	0.36	0.43	2.6	0.51	0.44	0.62	0.05
Specific Conductivity	ms/cm	---	0.231	0.324	0.348	0.174	0.216	0.253	---	---	0.588	0.535	0.786	1.828	0.97	1.405	0.553

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
 N = Matrix interference  
 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococcoides are present  
 Neg = results do not indicate active Dehalococcoides are present  
 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
 (3) = results from biotrap analysis by Shaw (cells/grams of beads)  
 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 8**  
**Water Quality Data**  
**BIOREMEDIATION PARAMETERS**

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

CONSTITUENT	UNITS	BW-02 1/24/2008	BW-02 4/21/2008	BW-02 7/28/2008	BW-02 10/22/2008	BW-02 1/13/2009	BW-02 4/2/2009	BW-02 7/14/2009	BW-02 10/27/2009	BW-02 1/28/2010	BW-02 4/22/2010	BW-02 10/28/2011	BW-02 8/20/2012	BW-03 10/11/2006	BW-03 1/30/2007	BW-03 4/10/2007	BW-03 7/19/2007
<b>Dissolved Metals</b>																	
Iron	mg/L	25	16.5	1.28	1.45	8.16	6.4	---	---	---	---	---	---	<0.100	74.1	64.5	24.5
Manganese	mg/L	3.49	4.56	1.54	3.42	2.32	2.4	---	---	---	---	---	---	1.86	67.4	14.8	12.5
<b>Metabolic Acids</b>																	
Acetic acid	mg/L	21	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	880	67	3.3
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	2600	<1.0	<1.0
n-Butanoic acid	mg/L	2.3	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	---	---	<2.0	<100	29	<2.0
Propionic acid	mg/L	15	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	1100	97	<1.0
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	<0.50	<25	<0.50	<0.50
<b>Miscellaneous Analyses</b>																	
Methane	ug/L	1600	5100	140	1700D	1900	1300	71	100	170	1400	---	---	29	2600	1000	950
Ethane	ug/L	<20	<100	<2.0	<1.0	<20	<25	<1.0	<1.0	<2.0	<25	---	---	<1.0	<50	<20	<10
Ethene	ug/L	<20	<100	<2.0	<1.0	<20	<25	1.9	<1.0	<2.0	<25	---	---	<1.0	<50	<20	47
Chloride	mg/L	84.5	74	45	45.4	87.2	97.8	---	---	---	---	---	---	---	67.2	248	57.3
TOC	mg/L	12.8	4.12	3.46	5.04	2.3	3.8	---	---	---	---	---	---	4.24	1620	111	8.16
Dehalococcoides sp.	cells/ml	<1.0 x 10 <sup>1</sup>	---	1.8 x 10 <sup>4</sup>	<3.6 x 10 <sup>1</sup>	1.4 x 10 <sup>3</sup>	4.6 x 10 <sup>3</sup>	9.5 x 10 <sup>3</sup>	1.6 x 10 <sup>4</sup>	7.6 x 10 <sup>3</sup>	<1.0 X 10 <sup>1</sup>	---	---	<3.3x10 <sup>1</sup>	8.0 x 10 <sup>3</sup>	<4.0 x 10 <sup>1</sup>	<2.5 x 10 <sup>1</sup> D
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	Neg	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																	
pH	--	5.70	6.46	6.14	6.58	6.12	6.46	6.11	6.25	---	---	6.12	5.86	6.76	6.75	7.04	7.13
ORP	mV	-50	11.4	-38.1	-91.8	-49.5	11.4	4	13.9	---	---	6.8	-85.5	228.1	-122.3	-188.7	-166.9
Dissolved Oxygen	mg/L	0.83	2.53	0.19	0.32	0.35	2.53	0.48	0.22	---	---	0.63	0.64	5.65	0.25	0.13	0.58
Specific Conductivity	ms/cm	0.444	0.219	0.184	0.482	0.361	0.219	0.192	0.213	---	---	0.314	0.259	0.411	2.787	0.796	0.598

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
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 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococcoides are present  
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 (3) = results from biotrap analysis by Shaw (cells/grams of beads)  
 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

CONSTITUENT	UNITS	BW-03 11/12/2007	BW-03 1/24/2008	BW-03 4/21/2008	BW-03 7/28/2008	BW-03 10/22/2008	BW-03 1/13/2009	BW-03 4/2/2009	BW-03 7/14/2009	BW-03 10/27/2009	BW-03 1/28/2010	BW-03 4/22/2010	BW-03 10/28/2011	BW-03 8/20/2012	BW-04 10/11/2006	BW-04 1/30/2007	BW-04 4/10/2007
<b>Dissolved Metals</b>																	
Iron	mg/L	20.3	37.4	28.7	1.67	17.9	12.6	18	---	---	---	---	---	---	<0.100	25.2	17.2
Manganese	mg/L	9.02	7.44	6.25	3.84	5.33	5.64	8	---	---	---	---	---	---	0.0434	27.9	6.49
<b>Metabolic Acids</b>																	
Acetic acid	mg/L	82	37	12	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	530	87
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	<10	<1.0
n-Butanoic acid	mg/L	9.6	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	---	---	<2.0	170	35
Propionic acid	mg/L	74	13	11	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	730	73
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---	---	<0.50	<5.0	<0.50
<b>Miscellaneous Analyses</b>																	
Methane	ug/L	3500	4100	5200	84	2700D	1900	2300	1300	45	800	2000	---	---	24	280	300
Ethane	ug/L	<50	<50	<100	<1.0	1.1	<20	<40	<20	<1.0	<10	<20	---	---	<1.0	<5.0	<5.0
Ethene	ug/L	<50	<50	<100	<1.0	9.5	<20	<40	<20	<1.0	<10	<20	---	---	<1.0	130	220
Chloride	mg/L	31.7	106	55.9	37.6	50.1	80.8	91.3	---	---	---	---	---	---	---	88.4	84.8
TOC	mg/L	86.2	24.1	14.9	4.77	5.85	3.8	2.8	---	---	---	---	---	---	2.46	729	107
Dehalococcoides sp.	cells/ml	4.0 x 10 <sup>3</sup>	1.6 x 10 <sup>2</sup>	---	<2.6 x 10 <sup>1</sup>	<4.0 x 10 <sup>1</sup>	2.0 x 10 <sup>3</sup>	1.5 x 10 <sup>3</sup>	1.7 x 10 <sup>4</sup>	1.0 x 10 <sup>4</sup>	---	<2.9 X 10 <sup>1</sup>	---	---	<1.2 x 10 <sup>1</sup>	2.6 x 10 <sup>4</sup>	1.5 x 10 <sup>4</sup>
Dehalococcoides sp.	(1)	---	---	Neg	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																	
pH	--	6.94	5.77	7.16	6.37	6.7	6.43	6.67	6.19	6.43	---	---	6.19	6.21	6.81	7.26	7.69
ORP	mV	-150	-109	-131.6	-98.3	-101.6	-102.1	-16.7	-84	-53.7	---	---	8.8	-89.4	239.2	-161.3	-227.5
Dissolved Oxygen	mg/L	0.04	0.35	0.18	0.21	0.33	0.62	1.27	0.25	0.12	---	---	0.39	0.4	2.55	0.6	0.14
Specific Conductivity	ms/cm	1.004	0.547	0.27	0.312	0.558	0.398	0.237	0.29	0.279	---	---	0.268	0.228	0.799	1.685	0.589

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
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 TOC = total organic carbon  
 cells/ml = cells per milliliter  
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 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 8**  
**Water Quality Data**  
**BIOREMEDIATION PARAMETERS**

Former Varian Facility Site  
 150 Sohier Road  
 Beverly, Massachusetts

CONSTITUENT	UNITS	BW-04 7/19/2007	BW-04 11/12/2007	BW-04 1/22/2008	BW-04 4/21/2008	BW-04 7/28/2008	BW-04 10/22/2008	BW-04 1/13/2009	BW-04 4/2/2009	BW-04 7/14/2009	BW-04 10/27/2009	BW-04 1/28/2010	BW-04 4/22/2010	BW-04 7/14/2010	BW-04 10/12/2010	BW-04 1/4/2011	BW-04 4/5/2011
<b>Dissolved Metals</b>																	
Iron	mg/L	26	49.6	11.9	9.61	7.42	7.75	9.46	10	---	---	---	---	---	---	---	---
Manganese	mg/L	8.3	11	25.3	2.96	3.18	2.15	3.82	3.2	---	---	---	---	---	---	---	---
<b>Metabolic Acids</b>																	
Acetic acid	mg/L	1.2	110	86	16	<1.0	7.6	1.9	<1.0	86	<1.0	<1.0	2	280J	3.9	<1.0	<1.0
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<10J	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	<2.0	20	5	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	35J	<2.0	<2.0	<2.0
Propionic acid	mg/L	<1.0	150	55	<1.0	<1.0	7.3	<1.0	<1.0	110	<1.0	<1.0	<1.0	660J	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.58	<5.0J	<0.50	<0.50	<0.50
<b>Miscellaneous Analyses</b>																	
Methane	ug/L	300	510	1200	5000	710	490D	4800	9200	2700	2300	37	1800	2200J	3200D	2000	1100
Ethane	ug/L	<5.0	<10	<20	<100	<8.0	9.7	<50	<100	<50	130	<1.0	<25	68J	99	110	40
Ethene	ug/L	450	850	<20	110	36	440D	99	1300	1100	550	26	830	950J	66	110	370
Chloride	mg/L	63	247	173	128	38	58.2	96.5	95.1	---	---	---	---	---	---	---	---
TOC	mg/L	6.05	118	72.9	19.9	8.59	10.2	22.1	15.2	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	2.6 x 10 <sup>3</sup>	3.7 x 10 <sup>2</sup>	3.6 x 10 <sup>2</sup>	---	5.8 x 10 <sup>4</sup>	7.4 x 10 <sup>4</sup>	6.2 x 10 <sup>4</sup>	<2.2 x 10 <sup>1</sup>	2.4 x 10 <sup>6</sup>	7.6 x 10 <sup>4</sup>	1.4 x 10 <sup>4</sup>	<2.9 X 10 <sup>1</sup>	2.5 X 10 <sup>5</sup>	<8.0 x 10 <sup>2</sup>	2.3 X 10 <sup>3</sup>	<6.3 x 10 <sup>1</sup>
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	Pos	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																	
pH	--	7.63	6.94	5.65	7.58	6.84	7.21	7.17	7.38	6.81	6.9	---	---	---	---	---	7.52
ORP	mV	-207.5	-128	-123	-138.3	-121.8	-142.9	-154	-140.4	-138	-116.7	---	---	---	---	---	-367
Dissolved Oxygen	mg/L	0.4	0.03	0.27	0.32	0.4	0.35	0.39	0.36	0.13	0.2	---	---	---	---	---	0.24
Specific Conductivity	ms/cm	0.517	1.401	1.283	0.638	0.742	0.817	1.134	0.821	1.186	0.701	---	---	---	---	---	0.69

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
 N = Matrix interference  
 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococcoides are present  
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 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
 (3) = results from biotrap analysis by Shaw (cells/grams of beads)  
 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 8**  
**Water Quality Data**  
**BIOREMEDIATION PARAMETERS**

Former Varian Facility Site  
 150 Sohier Road  
 Beverly, Massachusetts

CONSTITUENT	UNITS	BW-04 7/28/2011	BW-04 10/25/2011	BW-04 1/18/2012	BW-04 4/3/2012	BW-04 8/21/2012	BW-05 10/11/2006	BW-05 1/30/2007	BW-05 4/10/2007	BW-05 7/19/2007	BW-05 11/12/2007	BW-05 1/22/2008	BW-05 4/21/2008	BW-05 7/28/2008	BW-05 10/22/2008	BW-05 1/13/2009
<b>Dissolved Metals</b>																
Iron	mg/L	---	---	---	---	---	<0.100	39.8	8	3.21	9.6	13.5	5.68	5.45	10.5	20.1
Manganese	mg/L	---	---	---	---	---	<0.0100	63	4.78	2.05	3.61	3.49	2.28	2.28	1.75	4.7
<b>Metabolic Acids</b>																
Acetic acid	mg/L	<1.0	<1.0	<1.0	<1.0	---	<1.0	910	9	9.3	73	4	31	20	43	81
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	---	<1.0	<20	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	<2.0	<2.0	<2.0	<2.0	---	<2.0	82	<2.0	<2.0	4.2	<2.0	<2.0	<2.0	<2.0	2.1
Propionic acid	mg/L	<1.0	<1.0	<1.0	<1.0	---	<1.0	1600	5.1	2.3	160	<1.0U	5.2	<1.0	40	140
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	---	<0.50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5
<b>Miscellaneous Analyses</b>																
Methane	ug/L	590	240	17	1200D	960	33	180	95	360	300D	130	49	290	430D	<100
Ethane	ug/L	62	19	<1.0	28	60	<1.0	<2.0	<5.0	<10	2	5.4	3.2	4.4	40	<50
Ethene	ug/L	330	130	5.1	70	310	<1.0	80	410	650	470D	140	120	210	1800D	4400
Chloride	mg/L	---	---	---	---	---	---	82.5	86.4	83.4	118	140	115	81.1	77.1	205
TOC	mg/L	---	---	---	---	5.5	2.49	1120	12.4	10.2	103	6.23	26	10.5	44.7	106
Dehalococcoides sp.	cells/ml	1.4 X 10 <sup>2</sup>	5.5 x 10 <sup>4</sup>	1.8 x 10 <sup>4</sup>	<1.1 x 10 <sup>1</sup>	<3.7 x 10 <sup>1</sup>	<1.2x10 <sup>1</sup>	1.2x10 <sup>4</sup>	1.5x10 <sup>4</sup>	1.9x10 <sup>4</sup>	1.9x10 <sup>3</sup>	1.1x10 <sup>3</sup>	---	8.7 x 10 <sup>4</sup>	2.8 x 10 <sup>5</sup>	3.3 x 10 <sup>4</sup>
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	Neg	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																
pH	--	7.17	7.1	---	---	---	6.59	6.80	8.02	7.56	7.05	5.84	7.55	6.91	7.34	7.2
ORP	mV	-179.5	-141	---	---	---	250.4	-92.3	-216.8	-181.1	-147	-185	-175.8	-104.1	-170.6	-171.3
Dissolved Oxygen	mg/L	0.24	0.43	---	---	---	2.28	0.53	0.16	0.43	0.05	0.83	0.35	0.62	0.82	1.11
Specific Conductivity	ms/cm	0.484	0.567	---	---	---	0.802	4.144	0.634	0.580	1.534	0.773	0.534	0.47	0.601	0.952

Notes: < = Less than detection limit  
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 mg/L = Milligrams per liter  
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 mV = Millivolt  
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 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
 N = Matrix interference  
 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococcoides are present  
 Neg = results do not indicate active Dehalococcoides are present  
 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
 (3) = results from biotrap analysis by Shaw (cells/grams of beads)  
 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

CONSTITUENT	UNITS	BW-05 4/2/2009	BW-05 7/14/2009	BW-05 10/27/2009	BW-05 1/28/2010	BW-05 4/22/2010	BW-05 7/14/2010	BW-05 10/12/2010	BW-05 1/4/2011	BW-05 4/5/2011	BW-05 7/28/2011	BW-05 10/25/2011	BW-05 1/18/2012	BW-05 4/3/2012	BW-05 8/21/2012	BW-06 7/28/2011
<b>Dissolved Metals</b>																
Iron	mg/L	27	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	4.9	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Metabolic Acids</b>																
Acetic acid	mg/L	41	44	1.7	<1.0	43	56J	32	<1.0	20	89	53	30	<1.0	---	180
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0
n-Butanoic acid	mg/L	<2.0	---	<2.0	<2.0	<2.0	4.8J	<2.0	<2.0	<2.0	6.6	<2.0	<2.0	<2.0	---	8.7
Propionic acid	mg/L	43	34	<1.0	<1.0	43	88J	1.5	<1.0	<1.0	120	20	<1.0	<1.0	---	300
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50J	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---	<1.0
<b>Miscellaneous Analyses</b>																
Methane	ug/L	210	340	260	490	<100	1600J	1400	8900D	200	970	110	710	600D	4800D	210D
Ethane	ug/L	<100	<50	23	<40	<50	<25J	130	1000	<50	31	<25	<25	67	49	<1.0
Ethene	ug/L	5100	3600	1900	2300	4700	1900J	700	59	3700	1500	1700	4000D	750D	170	2800D
Chloride	mg/L	130	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	42.1	---	---	---	---	---	---	---	---	---	---	---	---	800	---
Dehalococcoides sp.	cells/ml	1.8 x 10 <sup>4</sup>	1.2 x 10 <sup>5</sup>	4.5 x 10 <sup>4</sup>	3.4 x 10 <sup>4</sup>	1.1 X 10 <sup>6</sup>	2.4 X 10 <sup>4</sup>	8.7 x 10 <sup>3</sup>	6.5 x 10 <sup>2</sup>	5.9 x 10 <sup>4</sup>	5.5 x 10 <sup>2</sup>	1.9 x 10 <sup>5</sup>	1.2 x 10 <sup>4</sup>	<1.0 x 10 <sup>1</sup>	<3.3 x 10 <sup>3</sup>	9.9 x 10 <sup>3</sup>
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degradars	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																
pH	--	7.41	7.18	7.22	---	---	---	---	---	7.67	7.34	7.36	---	---	---	7.15
ORP	mV	-165.6	-185	-138.8	---	---	---	---	---	-366	-170.8	-145.5	---	---	---	-157
Dissolved Oxygen	mg/L	0.27	0.34	0.43	---	---	---	---	---	0.34	0.43	0.66	---	---	---	0.16
Specific Conductivity	ms/cm	0.862	0.692	0.571	---	---	---	---	---	0.617	0.816	0.64	---	---	---	1.174

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
 N = Matrix interference  
 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococcoides are present  
 Neg = results do not indicate active Dehalococcoides are present  
 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
 (3) = results from biotrap analysis by Shaw (cells/grams of beads)  
 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration



**TABLE 8**  
**Water Quality Data**  
**BIOREMEDIATION PARAMETERS**

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

CONSTITUENT	UNITS	BW-06 10/25/2011	BW-06 1/18/2012	BW-06 4/3/2012	BW-06 8/21/2012	BW-08 11/12/2007	BW-08 1/22/2008	BW-08 4/21/2008	BW-08 7/28/2008	BW-08 10/22/2008	BW-08 1/13/2009	BW-08 4/2/2009	BW-08 7/14/2009	BW-08 10/27/2009	BW-08 1/28/2010	BW-08 4/22/2010
<b>Dissolved Metals</b>																
Iron	mg/L	---	---	---	---	43.5	43	26	21.8	24.5	18.5	27	---	---	---	---
Manganese	mg/L	---	---	---	---	13.2	13.5	9.56	9.42	1.75	5.26	7.9	---	---	---	---
<b>Metabolic Acids</b>																
Acetic acid	mg/L	1.5	110	63	---	50	12	<1.0	20	59	7	39	160	57	<1.0	<1.0
Lactic Acid	mg/L	<1.0	<1.0	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	<2.0	2.6	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0
Propionic acid	mg/L	<1.0	58	<1.0	---	38	<1.0U	<1.0	<1.0	68	2.5	26	140	1.9	<1.0	<1.0
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	---	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
<b>Miscellaneous Analyses</b>																
Methane	ug/L	51	270	1700	350	240	450	190	120	200D	220	350	520	1000	81	210
Ethane	ug/L	<5.0	<5.0	62	20	<5.0	48	3.2	<20	<1.0	<20	<100	<100	<100	12	<10
Ethene	ug/L	380	3900D	3500	77	360	67	120	1200	2600D	1500	7300	6900	5900	280	620
Chloride	mg/L	---	---	---	---	252	186	164	131	148	124	104	---	---	---	---
TOC	mg/L	---	---	---	271	55.6	12.6	3.46	12.2	63.4	10.1	34.4	---	---	---	---
Dehalococcoides sp.	cells/ml	2.5 x 10 <sup>4</sup>	3.1 x 10 <sup>4</sup>	1.2 x 10 <sup>5</sup>	<3.3 x 10 <sup>3</sup>	2.8x10 <sup>3</sup>	1.6x10 <sup>3</sup>	---	<2.1x10 <sup>1</sup>	2.9x10 <sup>6</sup>	4.5 x 10 <sup>2</sup>	1.3 x 10 <sup>3</sup>	1.4 x 10 <sup>5</sup>	5.6 x 10 <sup>5</sup>	4.8 x 10 <sup>4</sup>	<2.6 X 10 <sup>1</sup>
Dehalococcoides sp.	(1)	---	---	---	---	---	---	Pos	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																
pH	--	7.29	---	---	---	7.12	5.51	7.42	6.69	7.37	6.95	7.36	7.1	7.39	---	---
ORP	mV	-87.9	---	---	---	-141	-115	-113.2	-127.8	-180.1	-160.2	-138.4	-162	-191.5	---	---
Dissolved Oxygen	mg/L	0.92	---	---	---	0.09	0.24	0.35	0.43	0.29	0.2	0.16	0.14	0.06	---	---
Specific Conductivity	ms/cm	0.508	---	---	---	1.228	0.953	0.567	0.687	0.906	0.659	0.647	1.122	0.96	---	---

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
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 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
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 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

CONSTITUENT	UNITS	BW-08 7/14/2010	BW-08 10/12/2010	BW-08 1/5/2011	BW-08 4/5/2011	BW-08 7/28/2011	BW-08 10/25/2011	BW-08 1/18/2012	BW-08 4/3/2012	BW-08 8/21/2012	BW-09 7/20/2007	BW-09 8/9/2007	BW-09 11/12/2007	BW-09 1/22/2008	BW-09 4/21/2008	BW-09 7/28/2008
<b>Dissolved Metals</b>																
Iron	mg/L	---	---	---	---	---	---	---	---	---	---	16.5	32.2	25.4	31.8	12.2
Manganese	mg/L	---	---	---	---	---	---	---	---	---	---	7.07	15.1	15.1	10.4	4.17
<b>Metabolic Acids</b>																
Acetic acid	mg/L	130J	270	290	21	220	1.8	12	100	---	---	9.3	2.3	1.7	2.6	12
Lactic Acid	mg/L	<2.0J	<2.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	---	---	<1.0	4.9	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	22J	4.8	5.9	<2.0	11	<2.0	<2.0	<2.0	---	---	<2.0	<2.0	<2.0	<2.0	<2.0
Propionic acid	mg/L	260J	110	120	<1.0	250	<1.0	<1.0	2.2	---	---	8.9	<1.0	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	<1.0J	<1.0	<1.0	<0.50	<1.0	<0.50	<0.50	<0.50	---	---	<0.50	<0.50	<0.50	<0.50	<0.50
<b>Miscellaneous Analyses</b>																
Methane	ug/L	1500DJ	4900D	16000D	8900	2800	250	1600D	4300D	1700	---	150	370	220	280	190
Ethane	ug/L	29J	75	1700	650	<100	17	20	82	40	---	<10	<10	11	12	<20
Ethene	ug/L	3800DJ	1300D	250	1900	4800	1000D	760	3400D	39	---	570	640	73	160	1500
Chloride	mg/L	---	---	---	---	---	---	---	---	---	---	122	472	132	177	128
TOC	mg/L	---	---	---	---	---	---	---	---	194	---	13.3	8.14	10.6	6.01	10.2
Dehalococcoides sp.	cells/ml	2.3 X 10 <sup>4</sup>	1.0 x 10 <sup>4</sup>	<1.0 x 10 <sup>1</sup> U	3.7 x 10 <sup>4</sup>	2.1 x 10 <sup>2</sup>	4.6 x 10 <sup>4</sup>	2.9 x 10 <sup>5</sup>	1.8 x 10 <sup>5</sup>	<3.7 x 10 <sup>1</sup>	<3.3 x 10 <sup>3</sup> D	<1.0 x 10 <sup>1</sup>	1.4 x 10 <sup>3</sup>	7.7 x 10 <sup>2</sup>	---	3.2 x 10 <sup>5</sup>
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	Neg	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																
pH	---	---	---	---	7.5	7.21	7.43	---	---	---	7.20	7.11	---	5.81	7.5	6.93
ORP	mV	---	---	---	-373	-167.6	-116.7	---	---	---	-165	-138	---	-97	-214.3	-139.8
Dissolved Oxygen	mg/L	---	---	---	0.22	0.36	0.82	---	---	---	0.27	0.09	---	0.34	0.15	0.27
Specific Conductivity	ms/cm	---	---	---	0.608	1.408	0.565	---	---	---	0.675	0.865	---	0.826	0.6	0.683

Notes: < = Less than detection limit  
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 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
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**TABLE 8**  
**Water Quality Data**  
**BIOREMEDIATION PARAMETERS**

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

CONSTITUENT	UNITS	BW-09 10/22/2008	BW-09 1/13/2009	BW-09 4/2/2009	BW-09 7/14/2009	BW-09 10/27/2009	BW-09 1/28/2010	BW-09 4/22/2010	BW-09 7/28/2011	BW-09 10/25/2011	BW-09 1/18/2012	BW-09 4/3/2012	BW-09 8/21/2012	MW-009 10/11/2006	MW-009 1/30/2007	MW-009 4/10/2007	MW-009 7/19/2007
<b>Dissolved Metals</b>																	
Iron	mg/L	62.4	19.6	41	---	---	---	---	---	---	---	---	---	21.3	96.2	128	86.6
Manganese	mg/L	19.4	7.09	11	---	---	---	---	---	---	---	---	---	20.9	5.34	13.1	7.91
<b>Metabolic Acids</b>																	
Acetic acid	mg/L	290	5.6	17	260	56	<1.0	<1.0	530	<1.0	32	85	---	<1.0	1600	700	220
Lactic Acid	mg/L	<5.0	<1.0	<1.0	<2.0	1.5	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	---	<1.0	1300	<20	<2.0
n-Butanoic acid	mg/L	27	<2.0	<2.0	---	<2.0	<2.0	<2.0	31	<2.0	<2.0	<2.0	---	<2.0	410	540	77
Propionic acid	mg/L	490	<1.0	2.2	250	<1.0	<1.0	<1.0	680	<1.0	4.1	4.2	---	<1.0	2800	1300	160
Pyruvic Acid	mg/L	<2.5	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<2.5	<0.50	<0.50	<0.50	---	<0.50	<25	<10	<1.0
<b>Miscellaneous Analyses</b>																	
Methane	ug/L	420D	650	660	2500	2800	370	640	7500D	7400	2200	4500D	9400D	100	34	160	890
Ethane	ug/L	<1.0	42	<20	74	140	57	<10	200	1500	160	350	450	2.1	1.1	<2.0	<25
Ethene	ug/L	2400D	1200	2000	4600	4600	830	900	3500D	280	1100	4100D	370	3.4	1.9	6	1500
Chloride	mg/L	141	131	174	---	---	---	---	---	---	---	---	---	---	676	774	659
TOC	mg/L	365	9.8	13.8	---	---	---	---	---	---	---	---	1010	2.1	2600	1270	237
Dehalococcoides sp.	cells/ml	5.1 x 10 <sup>5</sup>	1.9 x 10 <sup>3</sup>	6.7 x 10 <sup>3</sup>	4.0 x 10 <sup>4</sup>	1.2 x 10 <sup>5</sup>	8.3 x 10 <sup>4</sup>	<2.4 x 10 <sup>1</sup>	5.1 x 10 <sup>1</sup>	1.2 x 10 <sup>3</sup>	1.5 x 10 <sup>5</sup>	3.1 x 10 <sup>5</sup>	<3.1 x 10 <sup>1</sup>	<1.0 x 10 <sup>1</sup>	---	1.3 x 10 <sup>4</sup>	1.7 x 10 <sup>4</sup>
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																	
pH	--	7.17	7.06	7.34	7.24	7.51	---	---	6.71	7.17	---	---	---	6.27	6.56	6.5	6.59
ORP	mV	-176.1	-167.1	-106.5	-174	-197.9	---	---	-163.4	-113.6	---	---	---	-15.6	-192.3	-160.6	-145.6
Dissolved Oxygen	mg/L	0.25	0.22	0.2	0.11	0.14	---	---	0.62	0.55	---	---	---	6.34	6.2	0.77	0.85
Specific Conductivity	ms/cm	1.601	0.724	0.699	1.463	1.094	---	---	3.207	0.636	---	---	---	3.378	7.305	8.721	1.99

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
 N = Matrix interference  
 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococcoides are present  
 Neg = results do not indicate active Dehalococcoides are present  
 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
 (3) = results from biotrap analysis by Shaw (cells/grams of beads)  
 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

CONSTITUENT	UNITS	MW-009 7/31/2007	MW-009 11/12/2007	MW-009 1/23/2008	MW-009 4/21/2008	MW-009 7/28/2008	MW-009 10/22/2008	MW-009 1/14/2009	MW-009 4/2/2009	MW-009 7/14/2009	MW-009 10/27/2009	MW-009 1/28/2010	MW-009 4/22/2010	MW-009 7/14/2010	MW-009 10/12/2010	MW-009 1/4/2011
<b>Dissolved Metals</b>																
Iron	mg/L	---	1.01	18.8	90.7	80.4	62.9	59.5	70	---	---	---	---	---	---	---
Manganese	mg/L	---	0.16	1.67	6.29	6.74	7.31	6.98	6	---	---	---	---	---	---	---
<b>Metabolic Acids</b>																
Acetic acid	mg/L	---	16	290D	1200	580	5.9	210E	390	1000	500	250	600	320J	6.1	<1.0
Lactic Acid	mg/L	---	<1.0	3.7	<10	<5.0	<1.0	<1.0	<1.0	370	<5.0	<2.0	<5.0	<2.0J	<1.0	<1.0
n-Butanoic acid	mg/L	---	<2.0	25	77	24	<2.0	4.9	11	---	30	12	63	11J	<2.0	<2.0
Propionic acid	mg/L	---	4.7	390D	1200	440	1.6	7.7	17	2900	810	200	370	74J	<1.0	<1.0
Pyruvic Acid	mg/L	---	<0.50U	<0.50U	<5.0	<2.5	<0.50	<0.50	<0.50	<20	<2.5	<1.0	<2.5	<1.0J	<0.50	<0.50
<b>Miscellaneous Analyses</b>																
Methane	ug/L	---	31	1300	10000	7100	16000D	15000	17000	9500	14000	16000	15000	15000J	12000	20000D
Ethane	ug/L	---	<1.0	<20	<200	<100	890D	1300	1900	360	330	870	1200	1200J	930	1500
Ethene	ug/L	---	18	160	2500	1800	2100D	<250	<250	1600	690	<250	1000	<250J	220	430
Chloride	mg/L	---	68	164	330	656	742	822	711	---	---	---	---	---	---	---
TOC	mg/L	---	9.74	319	957	444	7.25	109	183	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	---	6.4 x 10 <sup>2</sup>	1.2 x 10 <sup>3</sup>	---	8.1 x 10 <sup>3</sup>	<3.6 x 10 <sup>1</sup>	8.8 x 10 <sup>3</sup>	1.5 x 10 <sup>4</sup>	2.7 x 10 <sup>5</sup>	1.2 x 10 <sup>5</sup>	2.5 x 10 <sup>4</sup>	5.6 X 10 <sup>5</sup>	9.0 X 10 <sup>3</sup>	<6.4 X 10 <sup>1</sup>	3.3 X 10 <sup>3</sup>
Dehalococcoides sp.	(1)	---	---	---	Pos	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	1.28 x 10 <sup>6</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	1.5 x 10 <sup>4</sup>	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																
pH	--	---	6.57	5.89	6.76	6.46	6.79	6.83	6.87	6.51	6.51	---	---	---	---	---
ORP	mV	---	-132	-145	-120.4	-140.5	-158.4	-168.2	-143.3	-116	-105.1	---	---	---	---	---
Dissolved Oxygen	mg/L	---	0.18	0.59	0.39	0.33	0.31	0.52	0.74	0.74	0.31	---	---	---	---	---
Specific Conductivity	ms/cm	---	3.765	3.845	3.874	3.24	2.963	3.53	3.435	7.494	5.223	---	---	---	---	---

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
 N = Matrix interference  
 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococcoides are present  
 Neg = results do not indicate active Dehalococcoides are present  
 (1) = results from RNA analysis  
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**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

CONSTITUENT	UNITS	MW-009 4/5/2011	MW-009 7/28/2011	MW-009 10/25/2011	MW-009 1/17/2012	MW-009 4/3/2012	MW-009 8/21/2012	MW-030 11/16/2007	MW-030 4/25/2008	OB-09-BR 11/29/2006	OB-09-BR 1/31/2007	OB-09-BR 4/10/2007	OB-09-BR 7/19/2007	OB-09-BR 8/9/2007	OB-09-BR 11/12/2007	OB-09-BR 1/22/2008
<b>Dissolved Metals</b>																
Iron	mg/L	---	---	---	---	---	---	<0.100	---	6.18	0.715	2.26	0.399	0.407	0.792	1.1
Manganese	mg/L	---	---	---	---	---	---	0.914	---	0.262	0.189	0.216	0.0918	0.0965	0.157	0.157
<b>Metabolic Acids</b>																
Acetic acid	mg/L	6	<1.0U	<1.0	<1.0	<1.0	---	---	---	<1.0	---	1.2	<1.0	<1.0	<1.0	<1.0
Lactic Acid	mg/L	<1.0	<1.0U	<1.0	<1.0	<1.0	---	---	---	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	<2.0	<2.0U	<2.0	<2.0	<2.0	---	---	---	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0
Propionic acid	mg/L	1.6	<1.0U	<1.0	<1.0	<1.0	---	---	---	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	<0.50	<0.50U	<0.50	<0.50	<0.50	---	---	---	<0.50	---	<0.50	<0.50	<0.50	<0.50	<0.50
<b>Miscellaneous Analyses</b>																
Methane	ug/L	24000	15000	9500	17000D	16000	16000	---	---	510	---	8.8	860	12	36	44
Ethane	ug/L	1900	1400	830	1900	2000	2500	---	---	<1.0	---	<1.0U	<1.0	<1.0	1.3	1.1
Ethene	ug/L	910	1400	1100	2000	1200	1600	---	---	91	---	1.1	640	2	4.9	5.2
Chloride	mg/L	---	---	---	---	---	---	628	171	---	6.77	19.3	12.4	14	18.3	17.8
TOC	mg/L	---	---	---	---	---	28000	---	---	1.89	---	6.19	4.84	3.74	4.78	4.41
Dehalococcoides sp.	cells/ml	1.5 x 10 <sup>5</sup>	2.1 x 10 <sup>2</sup>	---	<4.0 X 10 <sup>1</sup>	<3.7 X 10 <sup>1</sup>	<3.3 x 10 <sup>3</sup>	---	---	---	---	<3.3x10 <sup>1</sup>	<2.0x10 <sup>1</sup> D	<1.0x10 <sup>1</sup>	3.9x10 <sup>2</sup>	<1.0x10 <sup>1</sup>
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																
pH	--	7.17	7.07	7.05	---	---	---	---	---	6.83	---	6.43	8.36	7.46	8.11	5.98
ORP	mV	-368	-169.8	-128.4	---	---	---	---	---	-20.1	---	-300.2	-314.9	-170	-248	-169
Dissolved Oxygen	mg/L	0.59	0.2	0.39	---	---	---	---	---	0.64	---	0.23	0.5	0.26	0.05	0.15
Specific Conductivity	ms/cm	5.494	4.105	2.545	---	---	---	---	---	0.185	---	0.127	0.094	0.143	0.141	0.229

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
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 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
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**TABLE 8**  
**Water Quality Data**  
**BIOREMEDIATION PARAMETERS**

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

CONSTITUENT	UNITS	OB-09-BR 4/21/2008	OB-09-BR 7/29/2008	OB-09-BR 10/22/2008	OB-09-BR 1/14/2009	OB-09-BR 4/9/2009	OB-09-BR 7/14/2009	OB-09-BR 10/28/2009	OB-09-BR 1/28/2010	OB-09-BR 4/22/2010	OB-09-BR 7/14/2010	OB-09-BR 10/12/2010	OB-09-BR 1/5/2011	OB-09-BR 4/6/2011	OB-09-BR 7/28/2011	OB-09-BR 10/25/2011	OB-09-BR 1/18/2012
<b>Dissolved Metals</b>																	
Iron	mg/L	0.394	1.97	2.84	1.5	1.5	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	0.0828	0.0971	0.17	0.166	0.24	---	---	---	---	---	---	---	---	---	---	---
<b>Metabolic Acids</b>																	
Acetic acid	mg/L	<1.0	1.8	1	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	2.7J	2.4	6	2.8	8.6	1.5	110
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0J	<2.0	<2.0	<2.0	<2.0	<2.0	2.7
Propionic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.3J	<1.0	<1.0	<1.0	<1.0	<1.0	58
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50J	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
<b>Miscellaneous Analyses</b>																	
Methane	ug/L	100	8.4	80	210	12000	170	500	170	340	560DJ	490	1300D	720	1600D	1200	660
Ethane	ug/L	<2.0	<1.0	<1.0	<2.5	<200	<2.5	<5.0	<2.0	<5.0	<5.0J	<10	<10	<10	<10	<20	<10
Ethene	ug/L	8.5	<1.0	3.6	4.5	<200	6.4	8.4	3	8.1	16J	13	28	20	34	<20	11
Chloride	mg/L	15.2	3.33	10.8	16	20	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	5.35	5.24	6.23	6.5	4.1	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	---	<3.3x10 <sup>1</sup>	1.1 x 10 <sup>4</sup>	2.7 x 10 <sup>4</sup>	<3.2 x 10 <sup>1</sup>	8.5 x 10 <sup>3</sup>	1.8 x 10 <sup>4</sup>	<6.7 x 10 <sup>1</sup>	<3.1 x 10 <sup>4</sup>	---	---	3.6 x 10 <sup>3</sup>	---	---	---	1.5 x 10 <sup>3</sup>
Dehalococcoides sp.	(1)	Pos	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																	
pH	--	9.15	8.53	9.64	9.18	7.69	7.91	8.83	7.48	---	8.51	7.65	8.51	8.10	---	---	---
ORP	mV	-275.8	96.2	-346.1	-335.4	-156	-323	-415.7	-174	---	-63	-311	-405.5	-363	---	---	---
Dissolved Oxygen	mg/L	0.76	0.4	0.92	1.2	0.36	0.11	0.86	0.36	---	0.26	0.31	0.67	0.31	---	---	---
Specific Conductivity	ms/cm	0.081	0.094	0.129	0.111	0.136	0.139	0.144	0.146	---	0.157	0.17	0.173	0.190	---	---	---

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**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

CONSTITUENT	UNITS	OB-09-BR 4/3/2012	OB-09-BR 8/21/2012	OB-09-DO 11/29/2006	OB-09-DO 1/31/2007	OB-09-DO 4/10/2007	OB-09-DO 7/19/2007	OB-09-DO 11/12/2007	OB-09-DO 1/22/2008	OB-09-DO 4/21/2008	OB-09-DO 7/29/2008	OB-09-DO 10/22/2008	OB-09-DO 1/13/2009	OB-09-DO 4/9/2009	OB-09-DO 4/27/2009	OB-09-DO 7/14/2009	OB-09-DO 10/28/2009
<b>Dissolved Metals</b>																	
Iron	mg/L	---	---	1.01	0.181	1.12	0.616	<0.100	<0.100	<0.100	<0.100	0.255	<0.100	<0.10	---	---	---
Manganese	mg/L	---	---	0.146	0.0364	0.0804	0.138	0.0444	0.0171	0.0445	<0.0100	0.0796	<0.0100	<0.010	---	---	---
<b>Metabolic Acids</b>																	
Acetic acid	mg/L	6.2	---	<1.0	---	35	1.9	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	---	<1.0	<1.0	2.8
Lactic Acid	mg/L	<1.0	---	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	<2.0	---	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	---	<2.0
Propionic acid	mg/L	<1.0	---	<1.0	---	41	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	<0.50	---	<0.50	---	<0.50	<0.50	<0.50	0.83	<0.50	<0.50	<0.50	<0.50	---	<0.50	<0.50	<0.50
<b>Miscellaneous Analyses</b>																	
Methane	ug/L	1700D	2500D	130	---	7.4	33000	100	230	9.6	<2.0	36	<2.0	10000	---	2100	610
Ethane	ug/L	<10	<20	17	---	<1.0	<500	<2.0	<2.5	<1.0	<1.0	<1.0	<1.0	320	---	130	16
Ethene	ug/L	42	66	7.6	---	<1.0	700	<2.0	<2.5	<1.0	<1.0	1.3	<1.0	370	---	73	31
Chloride	mg/L	---	---	---	9.75	18.3	9.45	9.39	12	3.64	<2.00	6.3	32.6	44.6	---	---	---
TOC	mg/L	---	12.3	4.71	---	5.09	8.87	11.4	3.96	8.15	9.51	9.63	5.7	4.4	---	---	---
Dehalococoides sp.	cells/ml	---	---	---	---	<2.6 x 10 <sup>1</sup>	<3.3 x 10 <sup>3</sup> D	1.2 x 10 <sup>3</sup>	<1.0 x 10 <sup>1</sup>	---	<4.8 x 10 <sup>1</sup>	<5.3 x 10 <sup>1</sup>	<2.0 x 10 <sup>1</sup>	<1.0 x 10 <sup>1</sup>	---	3.0 x 10 <sup>5</sup>	3.5 x 10 <sup>5</sup>
Dehalococoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococoides sp.	(2)	---	---	---	---	---	---	---	---	Neg	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																	
pH	---	---	---	6.41	---	6.64	7.28	7.11	5.36	8.16	6.48	7.24	6.48	6.22	6.52	6.95	6.69
ORP	mV	---	---	45.9	---	-41	-91.6	-43	42	-48.3	-71.8	-105.3	7.6	-41	37.9	-126	-130.7
Dissolved Oxygen	mg/L	---	---	0.64	---	6.81	0.32	0.61	0.45	0.34	0.29	0.28	0.77	0.14	0.34	0.12	0.32
Specific Conductivity	ms/cm	---	---	0.084	---	0.041	0.064	0.077	0.163	0.048	0.067	0.108	0.105	0.233	0.161	0.21	0.226

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
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 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
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 Field parameter results reported are from the closest date to the analytical sampling  
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 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
 (3) = results from biotrap analysis by Shaw (cells/grams of beads)  
 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 8**  
**Water Quality Data**  
**BIOREMEDIATION PARAMETERS**

Former Varian Facility Site  
 150 Sohler Road  
 Beverly, Massachusetts

CONSTITUENT	UNITS	OB-09-DO 1/28/2010	OB-09-DO 4/22/2010	OB-09-DO 7/14/2010	OB-09-DO 10/12/2010	OB-09-DO 1/5/2011	OB-09-DO 4/6/2011	OB-09-DO 7/28/2011	OB-09-DO 10/25/2011	OB-09-DO 1/18/2011	OB-09-DO 4/3/2012	OB-09-DO 8/21/2012	OB-09-S 10/11/2006	OB-09-S 1/30/2007	OB-09-S 4/10/2007	OB-09-S 7/26/2007	OB-09-S 7/31/2007
<b>Dissolved Metals</b>																	
Iron	mg/L	---	---	---	---	---	---	---	---	---	---	---	2.52	40	75.6	4.82	---
Manganese	mg/L	---	---	---	---	---	---	---	---	---	---	---	1.36	25.6	21.1	0.887	---
<b>Metabolic Acids</b>																	
Acetic acid	mg/L	<1.0	72	4.0J	3.7	1.5	1.2	2.1	7.8	1.4	<1.0	---	<1.0	790	140	26	---
Lactic Acid	mg/L	<1.0	<1.0	<1.0J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	<20	<5.0	<1.0	---
n-Butanoic acid	mg/L	<2.0	2.5	<2.0J	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	240	100	<2.0	---
Propionic acid	mg/L	<1.0	140	<1.0J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---	<1.0	1200	320	12	---
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50J	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	---	<0.50	<10	<2.5	<0.50	---
<b>Miscellaneous Analyses</b>																	
Methane	ug/L	180	4500	13000DJ	3000	12000D	3000	600	1800D	1200	1200	1800	180	30	8.7	48	---
Ethane	ug/L	<2.0	140	240J	80	410	100	<10	<25	<20	<20	<20	7.3	1.2	<1.0	<1.0	---
Ethene	ug/L	<2.0	110	210J	57	330	80	11	37	<25	<20	<20	80	13	40	81	---
Chloride	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	72.8	30.9	42.1	---
TOC	mg/L	---	---	---	---	---	---	---	---	---	---	29.7	9.63	1020	132	34.7	---
Dehalococcoides sp.	cells/ml	5.1 x 10 <sup>5</sup>	6.1 X 10 <sup>5</sup>	---	---	2.4 x 10 <sup>5</sup>	---	---	---	1.8 x 10 <sup>5</sup>	---	---	<2.3 x 10 <sup>1</sup>	1.3 x 10 <sup>5</sup>	7.1 x 10 <sup>3</sup>	---	---
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	8.79 x 10 <sup>6</sup>
Mn Degradors	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1.5 x 10 <sup>3</sup>
<b>Field Parameters</b>																	
pH	--	6.52	---	6.71	6.75	6.82	6.43	---	---	---	---	---	6.44	6.65	6.39	8.45	---
ORP	mV	-65	---	-34	-135	-171.6	-390	---	---	---	---	---	100.8	-169.5	-195.5	-129.5	---
Dissolved Oxygen	mg/L	0.26	---	0.19	0.27	0.32	0.16	---	---	---	---	---	5.9	0.44	1.36	1.45	---
Specific Conductivity	ms/cm	0.124	---	0.266	0.259	0.225	0.105	---	---	---	---	---	1.868	17.9	17.44	0.653	---

Notes: < = Less than detection limit  
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 D = Result reported is from a diluted sample  
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 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococcoides are present  
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 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
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 J - Estimated concentration



**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

CONSTITUENT	UNITS	OB-09-S 11/12/2007	OB-09-S 4/21/2008	OB-09-S 7/29/2008	OB-09-S 10/22/2008	OB-09-S 4/9/2009	OB-09-S 4/27/2009	OB-09-S 7/14/2009	OB-09-S 10/28/2009	OB-09-S 1/28/2010	OB-09-S 4/22/2010	OB-9-S 7/14/2010	OB-09-S 10/12/2010	OB-09-S 1/5/2011	OB-09-S 4/5/2011	OB-09-S 7/28/2011
<b>Dissolved Metals</b>																
Iron	mg/L	5.08	8.7	13.1	17	16	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	1.08	1.88	3.98	1.3	2	---	---	---	---	---	---	---	---	---	---
<b>Metabolic Acids</b>																
Acetic acid	mg/L	16	240	20	97	---	150	660	92	53	310	160J	250	870	390	940
Lactic Acid	mg/L	<1.0	<2.0	<1.0	<1.0	---	<1.0	<20	<1.0	<1.0	290	220J	<2.0	<10	<5.0	<10
n-Butanoic acid	mg/L	<2.0	61	2.2	4.3	---	31	---	16	9	100	17J	8.5	270	100	48
Propionic acid	mg/L	6.4	190	10	140	---	230	1700	110	57	830	210J	170	1700	510	1100
Pyruvic Acid	mg/L	<0.50	<1.0	<0.50	<0.50	---	<0.50	<10	<0.50	<0.50	<2.5	<1.0J	<1.0	<5.0	<2.5	<5.0
<b>Miscellaneous Analyses</b>																
Methane	ug/L	210	1700	1900	1200D	10000	---	10000	3700	12000	12000	13000J	9000	25000D	25000	21000D
Ethane	ug/L	3.4	<20	<20	40	<200	---	<200	<50	320	<200	240J	370	470	<500	330
Ethene	ug/L	88	400	640	1500D	4300	---	2000	580	820	1300	1700J	290	1000	1000	<200
Chloride	mg/L	63.2	168	222	116	122	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	24.9	331	20.9	101	231	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	1.8 x 10 <sup>3</sup>	---	<9.1 x 10 <sup>1</sup>	5.8 x 10 <sup>3</sup>	---	1.0 x 10 <sup>4</sup>	9.6 x 10 <sup>5</sup>	2.4 x 10 <sup>6</sup>	1.5 x 10 <sup>5</sup>	9.6 X 10 <sup>5</sup>	<1.0 X 10 <sup>2</sup>	7.2 x 10 <sup>3</sup>	8.1 x 10 <sup>3</sup>	9.4 x 10 <sup>5</sup>	1.6 x 10 <sup>3</sup>
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	Pos	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																
pH	--	6.42	6.74	6.0	6.6	6.43	6.43	6.3	---	6.45	---	6.42	6.3	6.16	6.8	---
ORP	mV	-82	-98.2	-34.7	-103.4	-126	-106.4	-100	-102	-102	---	-43	-98	-144.9	-367	---
Dissolved Oxygen	mg/L	0.19	0.58	0.39	0.6	0.53	0.24	0.17	0.31	1.49	---	0.44	0.19	0.40	0.54	---
Specific Conductivity	ms/cm	2.993	11.66	9.736	9.466	14	11.583	10.859	7.857	12.945	---	6.045	6.144	---	11.86	---

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
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**TABLE 8**  
**Water Quality Data**  
**BIOREMEDIATION PARAMETERS**

Former Varian Facility Site  
 150 Sohier Road  
 Beverly, Massachusetts

CONSTITUENT	UNITS	OB-09-S 10/25/2011	OB-09-S 1/18/2012	OB-09-S 4/3/2012	OB-09-S 8/21/2012	OB-15-S 1/19/2009	OB-15-S 4/9/2009	OB-15-S 7/14/2009	OB-15-S 1/28/2010	OB-15-S 4/22/2010	OB-15-S 10/12/2010	OB-15-S 1/4/2011	OB-15-S 7/28/2011	OB-15-S 10/25/2011	OB-15-S 1/17/2012	OB-15-S 4/3/2012
<b>Dissolved Metals</b>																
Iron	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Metabolic Acids</b>																
Acetic acid	mg/L	360	<1.0	54	---	---	---	180	<1.0	12	12	120	670	230	57	9.4
Lactic Acid	mg/L	<2.0	<1.0	<1.0	---	---	---	420	<1.0	490	<1.0	<1.0	<10	<2.0	<1.0	<1.0
n-Butanoic acid	mg/L	74	<2.0	<2.0	---	---	---	---	<2.0	<10	<2.0	4.6	120	37	<2.0	<2.0
Propionic acid	mg/L	300	<1.0	19	---	---	---	310	<1.0	24	11	110	1200	310	31	<1.0
Pyruvic Acid	mg/L	<1.0	<0.50	<0.50	---	---	---	<1.3U	<0.50	<2.5	<0.50	<0.50	<5.0	<1.0	<0.50	<0.50
<b>Miscellaneous Analyses</b>																
Methane	ug/L	18000	18000	27000D	13000	---	---	55	92	390	5400D	12000D	8100	11000D	21000D	21000
Ethane	ug/L	290	310	690	<200	---	---	<1.0U	<1.0	<5.0	<5.0	150	<100	210	400	370
Ethene	ug/L	<250	<250	<250	<200	---	---	90	24	170	540D	210	230	480	160	310
Chloride	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	---	---	---	210	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	4.9 x 10 <sup>5</sup>	4.8 x 10 <sup>4</sup>	6.4 x 10 <sup>5</sup>	<3.3 x 10 <sup>3</sup>	---	---	8.5 x 10 <sup>4</sup>	5.2 x 10 <sup>3</sup>	<7.7 X 10 <sup>1</sup>	8.8 x 10 <sup>4</sup>	1.1 x 10 <sup>5</sup>	6.1 x 10 <sup>1</sup>	1.8 x 10 <sup>7</sup>	<6.6 x 10 <sup>1</sup>	7.5 x 10 <sup>5</sup>
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																
pH	--	---	---	---	---	7.53	7.49	6.64	---	---	---	---	6.29	6.52	6.52	---
ORP	mV	---	---	---	---	-58	-143.2	-163	---	---	---	---	-145	-94.2	-94.2	---
Dissolved Oxygen	mg/L	---	---	---	---	0.48	0.3	0.37	---	---	---	---	0.24	0.41	0.41	---
Specific Conductivity	ms/cm	---	---	---	---	2.381	1.875	9.071	---	---	---	---	14.038	3.543	3.543	---

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
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 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
 N = Matrix interference  
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**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

CONSTITUENT	UNITS	OB-15-S 8/21/2012	STR-03 11/16/2007	STR-03 1/23/2008	STR-03 4/21/2008	STR-03 7/29/2008	STR-03 10/22/2008	STR-03 1/13/2009	STR-03 4/9/2009	STR-03 7/14/2009	STR-03 10/27/2009	STR-03 1/28/2010	STR-03 4/22/2010	STR-03 7/14/2010	STR-03 10/12/2010	STR-03 1/5/2011	STR-03 4/5/2011
<b>Dissolved Metals</b>																	
Iron	mg/L	---	0.371	8.87	0.324	2.45	31.6	1.44	3.5	---	---	---	---	---	---	---	---
Manganese	mg/L	---	0.0596	6.07	0.137	0.732	13.6	0.577	2.6	---	---	---	---	---	---	---	---
<b>Metabolic Acids</b>																	
Acetic acid	mg/L	---	<1.0	<1.0	<1.0	2.6	1.6	<1.0	<1.0	<1.0	<1.0	1.8	<1.0	1.5J	<1.0	<1.0	<1.0
Lactic Acid	mg/L	---	<1.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0J	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	---	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0J	<2.0	<2.0	<2.0
Propionic acid	mg/L	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0J	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	---	<0.50	<0.50	0.51	<0.50	0.97	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50J	<0.50	<0.50	<0.50
<b>Miscellaneous Analyses</b>																	
Methane	ug/L	21000	6.9	180	17	590	800D	20	39	270	4.5	24	46	4.3J	<2.0	5.5	2
Ethane	ug/L	300	<1.0U	7.4	<1.0	34	78	<1.0	1.3	13	<1.0	1.1	1.5	<1.0J	<1.0	<1.0	<1.0
Ethene	ug/L	280	<1.0U	37	<1.0	76	85	<1.0	6.2	13	<1.0	3.6	3.5	<1.0J	<1.0	<1.0	<1.0
Chloride	mg/L	---	9.85	1130	900	1170	1340	1790	1320	---	---	---	---	---	---	---	---
TOC	mg/L	1750	7.58	5.21	1.98	12.1	13	1.7	1.6	---	---	---	---	---	---	---	---
Dehalococcoides sp.	cells/ml	<3.3 x 10 <sup>3</sup>	<6.7 x 10 <sup>1</sup>	7.5 x 10 <sup>2</sup>	---	1.4 x 10 <sup>5</sup>	<3.4 x 10 <sup>1</sup>	<1.0 x 10 <sup>1</sup>	5.9 x 10 <sup>2</sup>	<1.0 x 10 <sup>1</sup>	2.0 x 10 <sup>4</sup>	5.2 x 10 <sup>3</sup>	<2.2 X 10 <sup>1</sup>	4.2 X 10 <sup>3</sup>	<6.4 x 10 <sup>1</sup>	1.6 X 10 <sup>3</sup>	3.1 x 10 <sup>3</sup>
Dehalococcoides sp.	(1)	---	---	---	Neg	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																	
pH	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
ORP	mV	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Dissolved Oxygen	mg/L	---	---	---	---	---	---	---	---	---	---	---	---	---	6.05	8.02	10.12
Specific Conductivity	ms/cm	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Notes: < = Less than detection limit  
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 mg/L = Milligrams per liter  
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**TABLE 8  
Water Quality Data  
BIOREMEDIATION PARAMETERS**

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

CONSTITUENT	UNITS	STR-03 7/28/2011	STR-03 10/25/2011	STR-03 1/18/2011	STR-03 4/3/2012	UNNAMED STREAM 10/11/2006	UNNAMED STREAM 2/1/2007	UNNAMED STREAM 3/1/2007	UNNAMED STREAM 4/16/2007	UNNAMED STREAM 7/19/2007	UNNAMED STREAM 11/16/2007	UNNAMED STREAM 1/23/2008	UNNAMED STREAM 4/21/2008	UNNAMED STREAM 7/29/2008	UNNAMED STREAM 10/22/2008	UNNAMED STREAM 1/14/2009
<b>Dissolved Metals</b>																
Iron	mg/L	---	---	---	---	0.237	---	0.186	4.92	---	1.42	22.6	64.6	78.6	76.4	47.8
Manganese	mg/L	---	---	---	---	0.0536	7.48	---	1.63	---	0.197	5.22	10.3	8.54	11	6.89
<b>Metabolic Acids</b>																
Acetic acid	mg/L	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	<1.0	<1.0	<1.0	5.6	3.4	<1.0
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
n-Butanoic acid	mg/L	<2.0	<2.0	<2.0	<2.0	---	---	<2.0	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Propionic acid	mg/L	<1.0	<1.0	<1.0	<1.0	---	---	<1.0	<1.0	---	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	---	---	<0.50	<0.50	---	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
<b>Miscellaneous Analyses</b>																
Methane	ug/L	5	49	170D	7.7	---	---	6.2	90	---	28	240	260	1100	1800D	470
Ethane	ug/L	<1.0	2.5	10	<1.0	---	---	<1.0	1.7	---	<1.0	14	14	120	260D	37
Ethene	ug/L	<1.0	7.8	36	<1.0	---	---	<1.0	3.5	---	<1.0	12	18	380	190D	37
Chloride	mg/L	---	---	---	---	---	---	---	380	---	21.7	861	1710	1640	175	1460
TOC	mg/L	---	---	---	---	---	---	1.6	10.8	---	9.6	5.92	8.98	12.0	15.6	16.7
Dehalococcoides sp.	cells/ml	<1.0 x 10 <sup>1</sup>	4.8 x 10 <sup>3</sup>	1.5 x 10 <sup>4</sup>	---	3.3 x 10 <sup>2</sup>	---	---	---	2.8 x 10 <sup>3</sup>	2.3 x 10 <sup>3</sup>	2.6 x 10 <sup>3</sup>	---	<2.3 x 10 <sup>1</sup>	<4.7 x 10 <sup>1</sup>	6.7 x 10 <sup>3</sup>
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	Neg	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>																
pH	--	---	---	---	---	7.26	---	---	---	---	---	---	---	---	---	---
ORP	mV	---	---	---	---	173.6	---	---	---	---	---	---	---	---	---	---
Dissolved Oxygen	mg/L	2.87	---	---	---	6.11	---	---	---	---	---	---	---	---	---	---
Specific Conductivity	ms/cm	---	---	---	---	2.78	---	---	---	---	---	---	---	---	---	---

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
 N = Matrix interference  
 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococcoides are present  
 Neg = results do not indicate active Dehalococcoides are present  
 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
 (3) = results from biotrap analysis by Shaw (cells/grams of beads)  
 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 8**  
**Water Quality Data**  
**BIOREMEDIATION PARAMETERS**

Former Varian Facility Site  
 150 Sohier Road  
 Beverly, Massachusetts

CONSTITUENT	UNITS	UNNAMED STREAM 4/9/2009	UNNAMED STREAM 7/14/2009	UNNAMED STREAM 10/27/2009	UNNAMED STREAM 1/28/2010	UNNAMED STREAM 4/22/2010	UNNAMED STREAM 10/12/2010	UNNAMED STREAM 1/4/2011	UNNAMED STREAM 4/5/2011	UNNAMED STREAM 10/25/2011	UNNAMED STREAM 1/17/2012	UNNAMED STREAM 4/3/2012	UNNAMED STREAM 8/21/2012
<b>Dissolved Metals</b>													
Iron	mg/L	22	---	---	---	---	---	---	---	---	---	---	---
Manganese	mg/L	6.1	---	---	---	---	---	---	---	---	---	---	---
<b>Metabolic Acids</b>													
Acetic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	4.5	<1.0	<1.0	<1.0	<1.0	<1.0	---
Lactic Acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---
n-Butanoic acid	mg/L	<2.0	---	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	---
Propionic acid	mg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	---
Pyruvic Acid	mg/L	<0.50	<0.50	<0.50	<0.50	<0.50	1.4	<0.50	<0.50	<0.50	<0.50	<0.50	---
<b>Miscellaneous Analyses</b>													
Methane	ug/L	240	240	2300	360	260	<2.0	780D	290	620D	200	350D	160
Ethane	ug/L	15	14	110	31	11	<1.0	57	19	52	12	26	14
Ethene	ug/L	24	65	61	70	46	<1.0	61	21	32	9.6	49	55
Chloride	mg/L	1170	---	---	---	---	---	---	---	---	---	---	---
TOC	mg/L	3.7	---	---	---	---	---	---	---	---	---	---	16.2
Dehalococcoides sp.	cells/ml	$3.8 \times 10^2$	$1.2 \times 10^5$	$2.1 \times 10^4$	$9.7 \times 10^2$	$<2.2 \times 10^1$	$1.6 \times 10^3$	$5.2 \times 10^2$	$<1.0 \times 10^1$	$1.4 \times 10^5$	$<4.0 \times 10^1$	$4.5 \times 10^3$	$<5.0 \times 10^1$
Dehalococcoides sp.	(1)	---	---	---	---	---	---	---	---	---	---	---	---
Dehalococcoides sp.	(2)	---	---	---	---	---	---	---	---	---	---	---	---
Mn Degraders	(3)	---	---	---	---	---	---	---	---	---	---	---	---
<b>Field Parameters</b>													
pH	--	---	---	---	---	---	---	---	---	---	---	---	---
ORP	mV	---	---	---	---	---	---	---	---	---	---	---	---
Dissolved Oxygen	mg/L	---	---	---	---	---	8.48	---	4.39	---	---	---	---
Specific Conductivity	ms/cm	---	---	---	---	---	---	---	---	---	---	---	---

Notes: < = Less than detection limit  
 --- = Not Sampled  
 mg/L = Milligrams per liter  
 ug/L = Micrograms per liter  
 mV = Millivolt  
 ms/cm = Millisiemen per centimeter  
 TOC = total organic carbon  
 cells/ml = cells per milliliter  
 D = Result reported is from a diluted sample  
 N = Matrix interference  
 Field parameter results reported are from the closest date to the analytical sampling  
 Pos = results indicate active Dehalococcoides are present  
 Neg = results do not indicate active Dehalococcoides are present  
 (1) = results from RNA analysis  
 (2) = results from biotrap analysis by Microbial Insights (cells/grams of beads)  
 (3) = results from biotrap analysis by Shaw (cells/grams of beads)  
 \* = Sample BW-03 collected on 1/28/2010 but was broken in transit, not analyzed.  
 J - Estimated concentration

**TABLE 9  
PERMANGANATE CONCENTRATIONS IN GROUNDWATER**

**Former Varian Facility Site  
150 Sohier Road, Beverly, Massachusetts**

Well ID	April 2010		September 2010		October 2010		January 2011		April 2011		October-November 2011		April 2012	
	NaMnO4 Result (mg/L)	Result (percent)	NaMnO4 Result (mg/L)	Result (percent)	NaMnO4 Result (mg/L)	Result (percent)	NaMnO4 Result (mg/L)	Result (percent)	NaMnO4 Result (mg/L)	Result (percent)	NaMnO4 Result (mg/L)	Result (percent)	NaMnO4 Result (mg/L)	Result (percent)
AP-12-BR	170,000	17	---	---	340,000	34	---	---	110,000	11.0	9,900	0.990	19,000	1.900
AP-12-DO	180	0.018	---	---	ND(<0.2)	NA	ND(<0.2)	NA	0.3	0.00003	ND(<0.2)	NA	0.2	0.00002
AP-12-S	1,500	0.15	---	---	---	---	---	---	---	---	---	---	ND(<0.2)	NA
AP-14-S	---	---	---	---	---	---	1	0.0001	---	---	---	---	---	---
AP-19	0.4	0.00004	---	---	ND(<0.2)	NA	---	---	ND(<0.1)	NA	ND(<0.2)	NA	ND(<0.2)	NA
AP-20	0.2	0.00002	---	---	ND(<0.2)	NA	---	---	0.1	0.00001	ND(<0.2)	NA	ND(<0.2)	NA
AP-21	40,000	4	---	---	15,000	1.5	---	---	8,200	0.8	1,000	0.1	2,200	0.220
AP-22	200	0.02	---	---	430	0.043	---	---	1.0	0.0001	3,200	0.32	10,000	1.000
AP-26-DO	0.1	0.00001	---	---	---	---	---	---	---	---	ND(<0.2)	NA	ND(<0.2)	NA
AP-27-DO	0.4	0.00004	---	---	ND(<0.2)	NA	---	---	---	---	0.4	0.00004	ND(<0.2)	NA
AP-30-DO	---	---	---	---	---	---	---	---	20,000	2.0	---	---	---	---
AP-30R-DO	---	---	---	---	---	---	---	---	---	---	84,000	8.40	19,000	1.900
AP-31-DO	---	---	---	---	---	---	---	---	12,000	1.2	2,400	0.24	0.2	0.00002
AP-32-DO	---	---	---	---	---	---	---	---	3.7	0.00037	ND(<0.2)	NA	0.2	0.00002
CL03-DO	---	---	---	---	---	---	---	---	---	---	---	---	---	---
CL05-DOA	0.3	0.00003	---	---	---	---	---	---	---	---	---	---	---	---
CL10-BR	---	---	---	---	---	---	---	---	0.2	0.00002	---	---	---	---
CL10-DO	820	0.082	---	---	350	0.035	---	---	250	0.0	7.1	0.00071	44.0	0.0044
CL10-S	---	---	---	---	---	---	---	---	ND(<0.1)	NA	---	---	---	---
GZ-2R	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-005	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-013	2,900	0.29	---	---	1,400	0.14	---	---	6,900	0.7	1,200	0.12	1,300	0.130
OB-10-BR	---	---	4500	0.45	---	---	ND(<0.2)	NA	---	---	---	---	---	---
OB-10-S	35	0.0035	240	0.024	---	---	---	---	87	0.0087	---	---	---	---
OB-12-BR	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OB-12-DO	200	0.02	0.3	0.00003	---	---	ND(<0.2)	NA	---	---	190	0.01903	ND(<0.2)	NA
OB-15-S	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OB-19-DO	---	---	---	---	ND(<0.2)	NA	---	---	---	---	ND(<0.2)	NA	---	---
OB-20-BR	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OB-25-BR	---	---	---	---	---	---	---	---	9,200	0.9	---	---	ND(<0.2)	NA
OB-25-DO	0.4	0.00004	---	---	---	---	---	---	---	---	---	---	---	---
OB-26-BR	0.4	0.00004	---	---	---	---	---	---	---	---	---	---	0.2	0.00002
OB-27-BR	4200	0.42	---	---	7,400	0.74	---	---	14,000	1.4	1,500	0.1500	5,700	0.570
OB-27-DO	---	---	---	---	---	---	---	---	---	---	---	---	---	---
OB-28-BR	19	0.0019	---	---	---	---	---	---	15	0.0015	---	---	ND(<0.2)	NA
OB-32-DO	1400	0.14	2,500	0.25	1,300	0.13	500	0.05	1,200	0.1	670	0.0670	630.0	0.063
OB-34-DO	36	0.0036	24	0.0024	29	0.0029	41.3	0.00413	18	0.0018	ND(<0.2)	NA	31	0.0031
OB-35-DO	0.3	0.00003	---	---	ND(<0.2)	NA	---	---	ND(<0.1)	NA	ND(<0.2)	NA	ND(<0.2)	NA
OB-36-DO	0.4	0.00004	ND(<0.2)	NA	---	---	---	---	ND(<0.1)	NA	---	---	0.3	0.00003
OB-37-DO	140	0.014	---	---	11,000	1.1	---	---	180,000	18.0	34.0	0.003	9,700	0.9700
RW-2	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Notes:

Color Key:

	Sample Dark Purple
	Sample Medium Purple
	Sample Light Purple
	Sample Pink
	Pale Pink

No color indicates groundwater sample was clear

--- = sample not collected

ND (<0.2) = Not detected at estimated detection limit.

NA = Not applicable or value does not appear when reporting to 2 significant figures.

mg NaMnO4/L = milligrams of sodium permanganate per liter

**Table 10**  
**Soil Analytical Results**  
**Building 5 SVE Trench**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

CONSTITUENT	BLDG5-SVE1 8/2/2012	BLDG5-SV2 8/2/2012
<b>VOC (ug/kg)</b>		
1,1,1,2-Tetrachloroethane	<690	<460
1,1,1-Trichloroethane	<690	<460
1,1,2,2-Tetrachloroethane	<690	<460
1,1,2-Trichloroethane	<690	<460
1,1-Dichloroethane	<690	<460
1,1-Dichloroethene	<690	<460
1,1-Dichloropropene	<690	<460
1,2,3-Trichlorobenzene	<690	<460
1,2,3-Trichloropropane	<690	<460
1,2,4-Trichlorobenzene	<690	<460
1,2,4-Trimethylbenzene	<690	<460
1,2-Dibromo-3-chloropropane	<690	<460
1,2-Dibromoethane (EDB)	<690	<460
1,2-Dichlorobenzene	<690	<460
1,2-Dichloroethane	<690	<460
1,2-Dichloropropane	<690	<460
1,3,5-Trimethylbenzene	<690	<460
1,3-Dichlorobenzene	<690	<460
1,3-Dichloropropane	<690	<460
1,4-Dichlorobenzene	<690	<460
1,4-Dioxane	<14000	<9300
2,2-Dichloropropane	<690	<460
2-Butanone	<690	<460
2-Hexanone	<690	<460
4-Isopropyltoluene	<690	<460
4-Methyl-2-pentanone	<690	<460
Acetone	<690	<460
Benzene	<690	<460
Bromobenzene	<690	<460
Bromodichloromethane	<690	<460
Bromoform	<690	<460
Bromomethane	<690	<460
Carbondisulfide	<690	<460
Carbontetrachloride	<690	<460
Chlorobenzene	<690	<460
Chlorobromomethane	<690	<460
Chloroethane	<690	<460
Chloroform	<690	<460

**Table 10**  
**Soil Analytical Results**  
**Building 5 SVE Trench**  
Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

<b>CONSTITUENT</b>	<b>BLDG5-SVE1 8/2/2012</b>	<b>BLDG5-SV2 8/2/2012</b>
Chloromethane	<690	<460
cis-1,2-Dichloroethene	<690	<460
cis-1,3-Dichloropropene	<690	<460
Dibromochloromethane	<690	<460
Dibromomethane	<690	<460
Dichlorodifluoromethane	<690	<460
Dichloromethane	<690	<460
Diethyl ether	<690	<460
Diisopropyl Ether	<690	<460
Ethylbenzene	<690	<460
Hexachlorobutadiene	<690	<460
Isopropylbenzene	<690	<460
Methyltert-butylether	<690	<460
Naphthalene	<690	<460
n-Butylbenzene	<690	<460
n-Propylbenzene	<690	<460
o-Chlorotoluene	<690	<460
p-Chlorotoluene	<690	<460
sec-Butylbenzene	<690	<460
Styrene	<690	<460
tert-AmylMethyl Ether	<690	<460
tert-Butylbenzene	<690	<460
tert-ButylEthyl Ether	<690	<460
Tetrachloroethene	<690	<460
Tetrahydrofuran	<690	<460
Toluene	<690	<460
trans-1,2-Dichloroethene	<690	<460
Trans-1,3-Dichloropropene	<690	<460
Trichloroethene	<690	<460
Trichlorofluoromethane	<690	<460
Vinyl chloride	<690	<460
m/p-xylene	<1400	<930
o-Xylene	<690	<460

**Notes:**

Analytical results presented in micrograms per kilogram (ug/kg).

<690 - not-detected above the detection limit of 690

VOC - volatile organic compounds



**Table 11**  
**Soil Vapor Analytical Results**  
**Building 5 SVE Pilot Test**  
Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

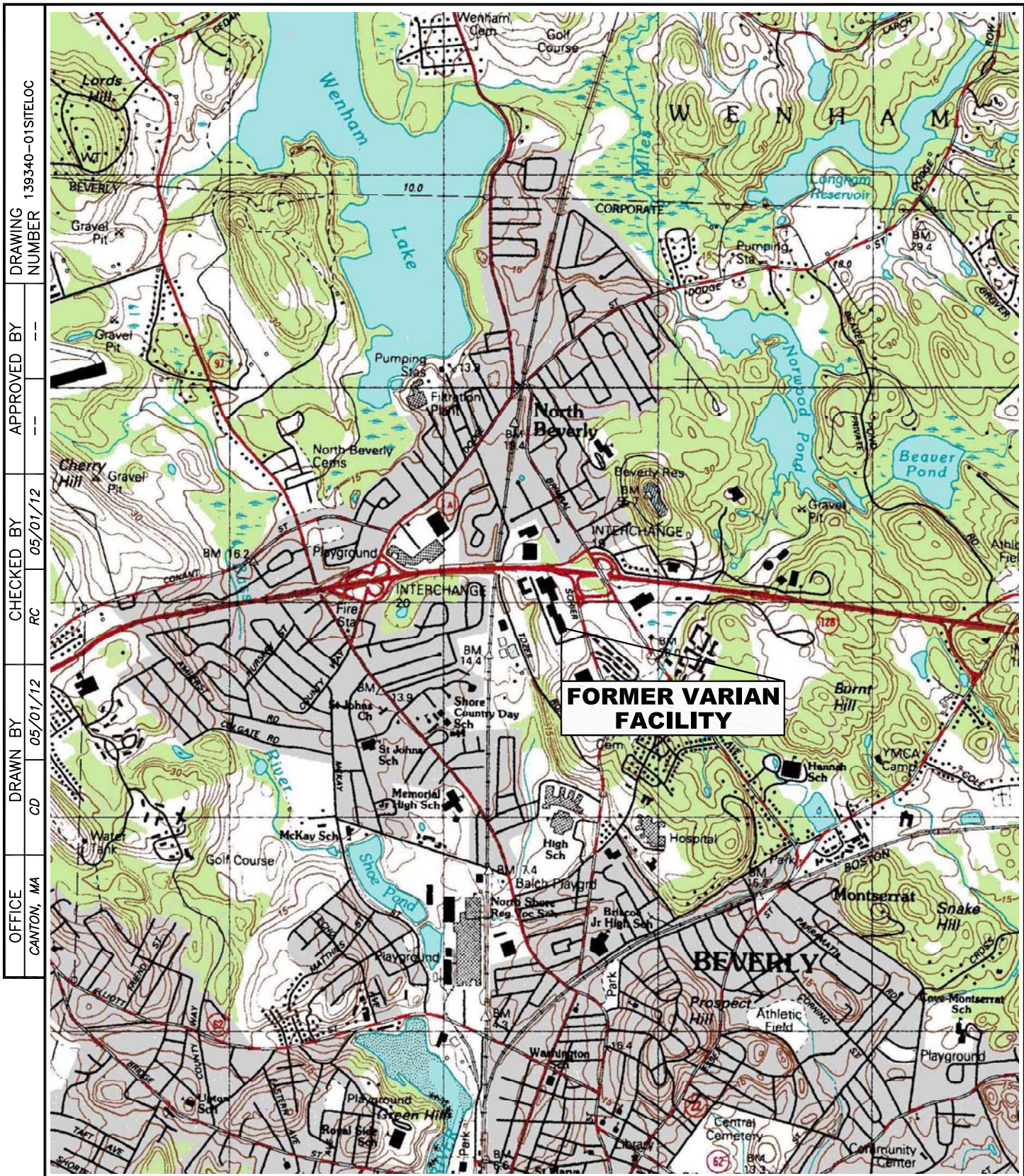
CONSTITUENT (ug/m <sup>3</sup> )	BLDG5-SVE1 9/8/2012	BLDG5-SVE2 9/8/2012
1,1,1-Trichloroethane	<3400	<71
1,1,2,2-Tetrachloroethane	<860	<18
1,1,2-Trichloroethane	<3400	<71
1,1-Dichloroethane	<2600	<53
1,1-Dichloroethene	<2500	<52
1,2-Dichloroethane	<2600	<53
1,2-Dichloropropane	<2900	<60
Acetone	<29000	790
Bromodichloromethane	<860	<18
Bromoform	<6500	<130
Bromomethane	<2500	<51
Carbontetrachloride	<400	<8.3
Chlorobenzene	<2900	<60
Chloroethane	<3300	<68
Chloroform	<3100	<64
Chloromethane	<2600	<53
cis-1,2-Dichloroethene	<2500	<52
cis-1,3-Dichloropropene	<5700	<120
Dibromochloromethane	<1100	<22
Dichloromethane	14000	<45
Ethylbenzene	<5400	<110
m/p-xylene	<11000	<230
o-Xylene	<5400	<110
Tetrachloroethene	26000	1700
trans-1,2-Dichloroethene	<2500	<52
Trans-1,3-Dichloropropene	<2900	<59
Trichloroethene	240000	5800
Trichlorofluoromethane	<3600	<73
Vinyl chloride	<340	<7.1
Xylenes (total)	<11000	<230

Notes:

ug/m<sup>3</sup>=micrograms per cubic meter

## FIGURES





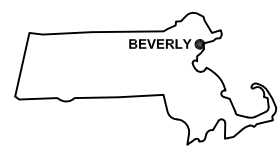
DRAWING NUMBER 139340-01SITELOC

APPROVED BY

CHECKED BY RC 05/01/12

DRAWN BY CD 05/01/12

OFFICE CANTON, MA



MASSACHUSETTS

SOURCE:  
 USGS 7.5 MIN. SERIES TARGET QUAD, 1985  
 SCALE: 1:25,000  
 X = 250750 m  
 Y = 925017 m  
 MA STATE PLANE GRID (meters)



150 ROYALL STREET  
 CANTON, MASSACHUSETTS  
 (617) 589-5111

FIGURE 1  
 SITE LOCATION MAP  
 FORMER VARIAN FACILITY  
 150 SOHIER ROAD  
 BEVERLY, MASSACHUSETTS



DRAWN BY	CD	CHECKED BY	RC	10/17/12	DRAWING NAME
	10/17/12	APPROVED BY	RC	10/17/12	SITE_PLAN22b

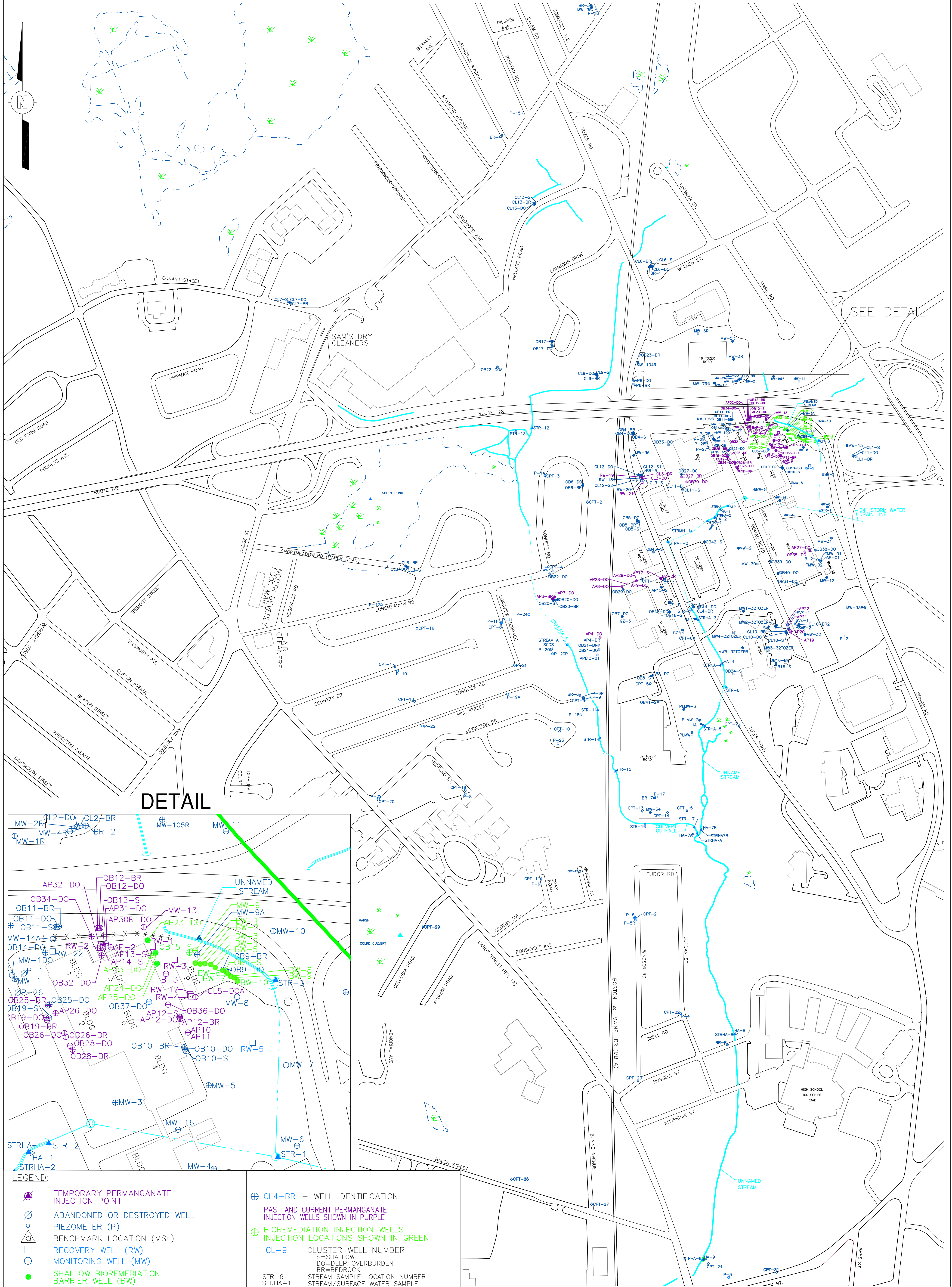


FIGURE 2  
 EXPANDED SITE PLAN FOR RTN 3-0485  
 FORMER VARIAN FACILITY SITE - BEVERLY, MA.

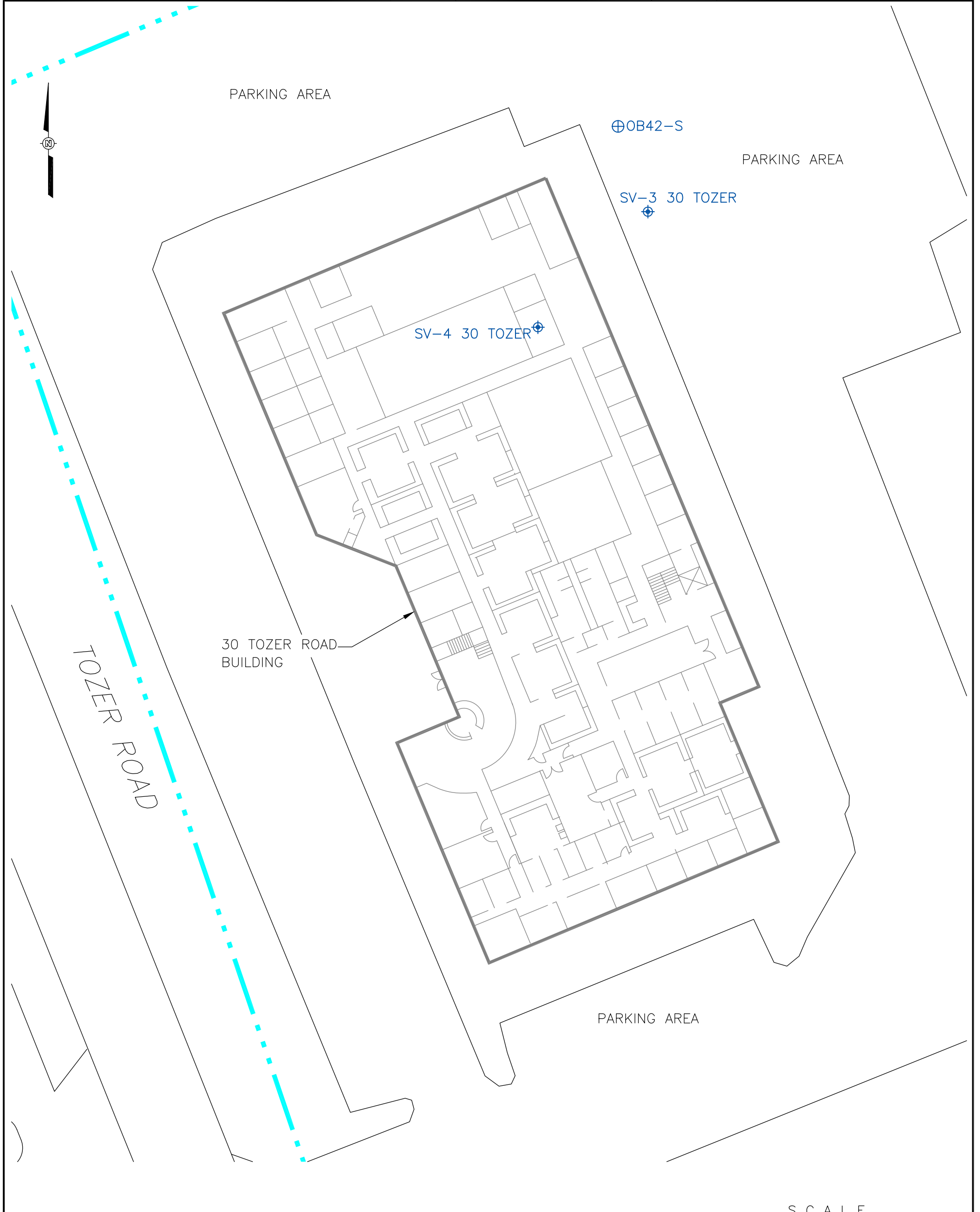
<p>TEMPORARY PERMANGANATE INJECTION POINT</p> <p>ABANDONED OR DESTROYED WELL</p> <p>PIEZOMETER (P)</p> <p>BENCHMARK LOCATION (MSL)</p> <p>RECOVERY WELL (RW)</p> <p>MONITORING WELL (MW)</p> <p>SHALLOW BIOREMEDIATION BARRIER WELL (BW)</p> <p>SURFACE WATER STREAM (STR) SAMPLE LOCATION</p> <p>HAND AUGER WELL LOCATION NUMBER</p> <p>STREAM/MANHOLE LOCATION NUMBER</p> <p>MONITORING WELL NUMBER</p> <p>MONITORING WELL NUMBER</p> <p>MONITORING WELL NUMBER</p> <p>MONITORING WELL NUMBER</p> <p>MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT</p> <p>APPROXIMATE BUILDING LOCATION</p> <p>APPROXIMATE DRAIN MANHOLE LOCATION</p> <p>APPROXIMATE LOCATION OF STREAM IN CULVERT</p> <p>APPROXIMATE STREAM LOCATION</p> <p>WATER AND MARSH AREA</p>	<p>CL4-BR - WELL IDENTIFICATION</p> <p>PAST AND CURRENT PERMANGANATE INJECTION WELLS SHOWN IN PURPLE</p> <p>BIOREMEDIATION INJECTION WELLS INJECTION LOCATIONS SHOWN IN GREEN</p> <p>CL-9 CLUSTER WELL NUMBER</p> <p>S=SHALLOW</p> <p>DO=DEEP OVERBURDEN</p> <p>BR=BEDROCK</p> <p>STR-6 STREAM SAMPLE LOCATION NUMBER</p> <p>STRHA-1 STREAM/SURFACE WATER SAMPLE</p> <p>HA-1 HAND AUGER WELL LOCATION NUMBER</p> <p>STRMH-1 STREAM/MANHOLE LOCATION NUMBER</p> <p>MW-5 MONITORING WELL NUMBER</p> <p>MW-1 MONITORING WELL NUMBER</p> <p>PLMW-1 MONITORING WELL NUMBER</p> <p>BR-1 BEDROCK WELL NUMBER</p> <p>BECKROCK WELLS BR-1 THROUGH BR-8 AND CL9-BR HAVE MULTILEVEL GROUNDWATER MONITORING SYSTEMS PRESENT WITHIN THE BEDROCK. ZONE 1 REFERS TO THE DEEPEST SAMPLING ZONE, ZONE 2 REFERS TO THE MIDDLE SAMPLING INTERVAL, AND ZONE 3 CLOSEST TO THE GROUND SURFACE.</p> <p>THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JUNE 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004, 2005, JULY 2012, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY SHAW ENVIRONMENTAL.</p>
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<p>PREPARED FOR: VARIAN MEDICAL FACILITY, INC. PALO ALTO, CALIFORNIA</p> <p>SCALE</p> <p>DATE: 17 OCTOBER 2012</p> <p>PREPARED BY:</p>	<p>DRAFTED BY: CD</p> <p>PROJECT NO.: 146899</p> <p><b>Shaw</b>                  Environmental &amp; Infrastructure, Inc.</p>
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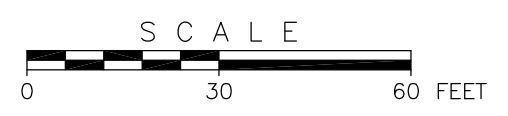


OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
CANTON, MA	CD 09/15/12	PH 09/15/12	-- --	30TOZERROAD_2




**LEGEND**

-  MONITORING WELL (MW)
-  SOIL VAPOR SAMPLE LOCATIONS
-  APPROXIMATE BUILDING LOCATION
-  APPROXIMATE LOCATION OF STREAM



**REFERENCE:**  
 1) THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JUNE 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004; 2005, JULY 2012, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY SHAW ENVIRONMENTAL.  
 2) INTERIOR FEATURES DEPICTED WITHIN 30 TOZER ROAD BUILDING WERE ADDED USING MAP FROM SIEMASKO+VERBRIDGE TITLED '1ST FLOOR PLAN'. ADDITIONAL INFORMATION DERIVED FROM SHAW ENVIRONMENTAL MAP TITLED 'SITE PLAN', AND SHAW ENVIRONMENTAL FIELD RECONNAISSANCE.



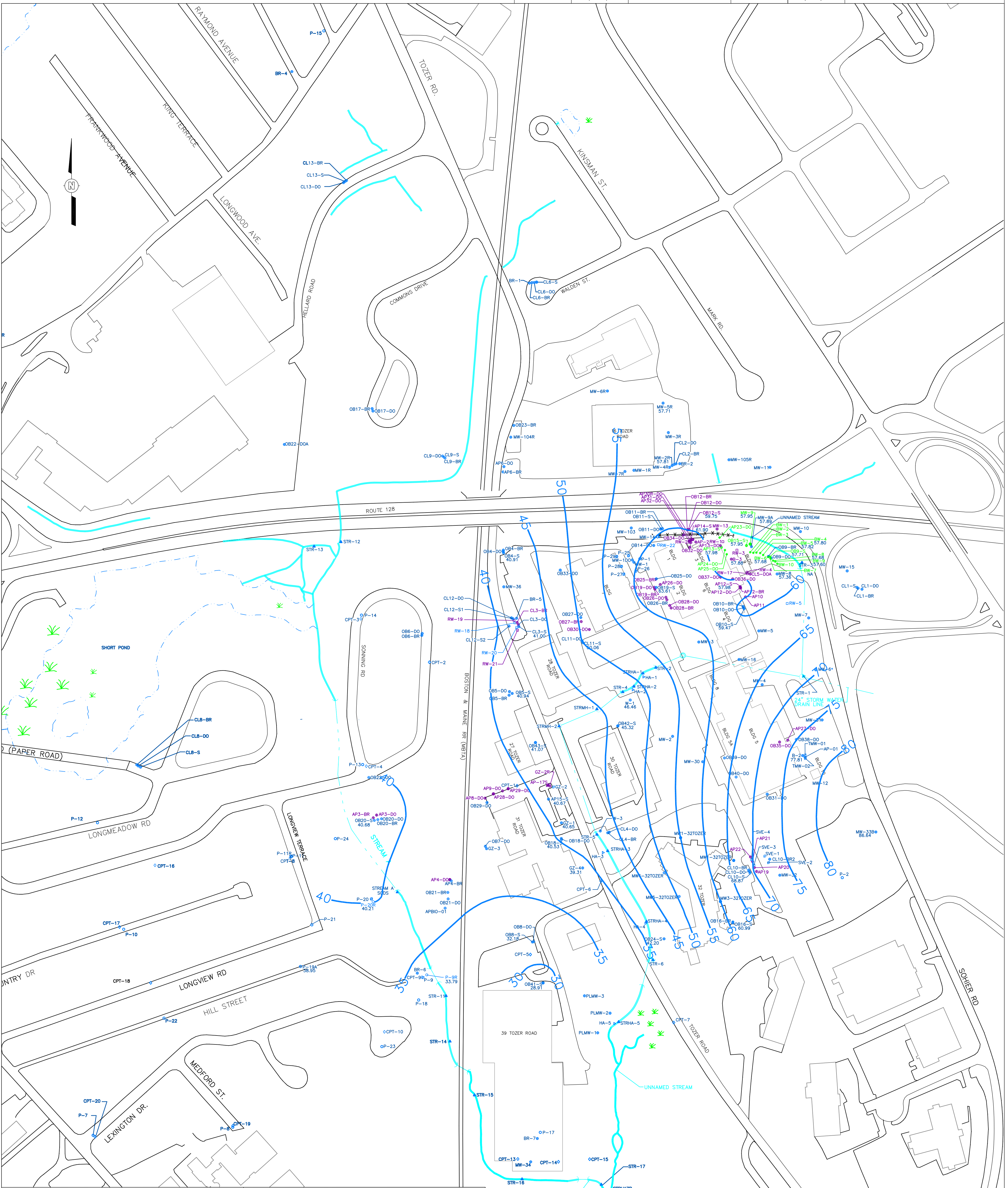
150 ROYALL STREET  
 CANTON, MASSACHUSETTS  
 (617) 589-5111

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**FIGURE 4**  
**30 TOZER ROAD PLAN**  
 VARIAN MEDICAL SYSTEMS, INC.  
 150 SOHIER ROAD  
 BEVERLY, MASSACHUSETTS



DRAWN BY	CD	CHECKED BY	RC	10/18/12	DRAWING NAME
	10/18/12	APPROVED BY	RC	10/18/12	SH GWC-APR12



**LEGEND:**

- +++++ RAILROAD TRACK
- ⊗ TEMPORARY INJECTION POINT
- ⊘ ABANDONED OR DESTROYED WELL
- PIEZOMETER (P)
- △ BENCHMARK LOCATION (MSL)
- RECOVERY WELL (RW)
- ⊕ MONITORING WELL (MW)
- ▲ SURFACE WATER STREAM (STR) SAMPLE LOCATION
- ◇ CONE PENETROMETER TESTPOINT (CPT)
- ◇ HAND AUGER SAMPLE LOCATION (HA) ADJACENT TO A STREAM (STRHA)
- ⊕ BIOREMEDIATION INJECTION WELLS INJECTION LOCATIONS SHOWN IN GREEN
- SHALLOW BIOREMEDIATION BARRIER WELL (BW)
- STRMH MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT
- APPROXIMATE BUILDING LOCATION
- ⊙ APPROXIMATE DRAIN MANHOLE LOCATION
- APPROXIMATE LOCATION OF STREAM IN CULVERT
- APPROXIMATE STREAM LOCATION
- WATER AND MARSH AREA

- ⊕ OB18-S - WELL IDENTIFICATION  
40.53  
- GROUNDWATER ELEVATION - ELEVATION IN FEET  
- GAUGING DATES 04/03/2012 THROUGH 04/06/2012  
- DASHED WHERE INFERRED
- ▲ PAST AND CURRENT PERMANGANATE INJECTION WELLS SHOWN IN PURPLE
- CL-9 CLUSTER WELL NUMBER  
S=SHALLOW  
DO=DEEP OVERBURDEN  
BR=BEDROCK
- STR-6 STREAM SAMPLE LOCATION NUMBER  
STRHA-1 STREAM/SURFACE WATER SAMPLE  
HA-1 HAND AUGER WELL LOCATION NUMBER  
STRMH-1 STREAM/MANHOLE LOCATION NUMBER  
MW-5 MONITORING WELL NUMBER  
GZ-1 MONITORING WELL NUMBER  
PLMW-1 MONITORING WELL NUMBER  
BR-1 BEDROCK WELL NUMBER

BEDROCK WELLS BR-1 THROUGH BR-8 AND CL9-BR HAVE MULTILEVEL GROUNDWATER MONITORING SYSTEMS PRESENT WITHIN THE BEDROCK. ZONE 1 REFERS TO THE DEEPEST SAMPLING ZONE, ZONE 2 REFERS TO IS THE MIDDLE SAMPLING INTERVAL, AND ZONE 3 CLOSEST TO THE GROUND SURFACE. THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1984, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JUNE 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004, JULY 2012, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY SHAW ENVIRONMENTAL.

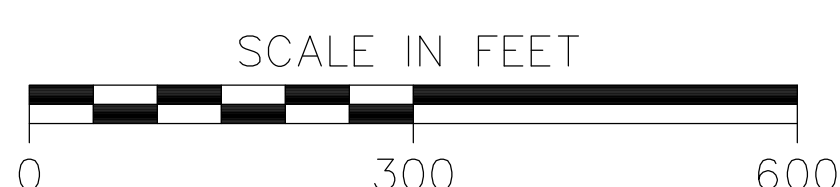


FIGURE 5  
 GROUNDWATER ELEVATION CONTOURS IN  
 SHALLOW OVERBURDEN AQUIFER

PREPARED FOR: VARIAN MEDICAL SYSTEMS, INC.  
 PALO ALTO, CALIFORNIA

SCALE: 1" = 150'

DRAFTED BY: CD

DATE: 18 OCTOBER 2012

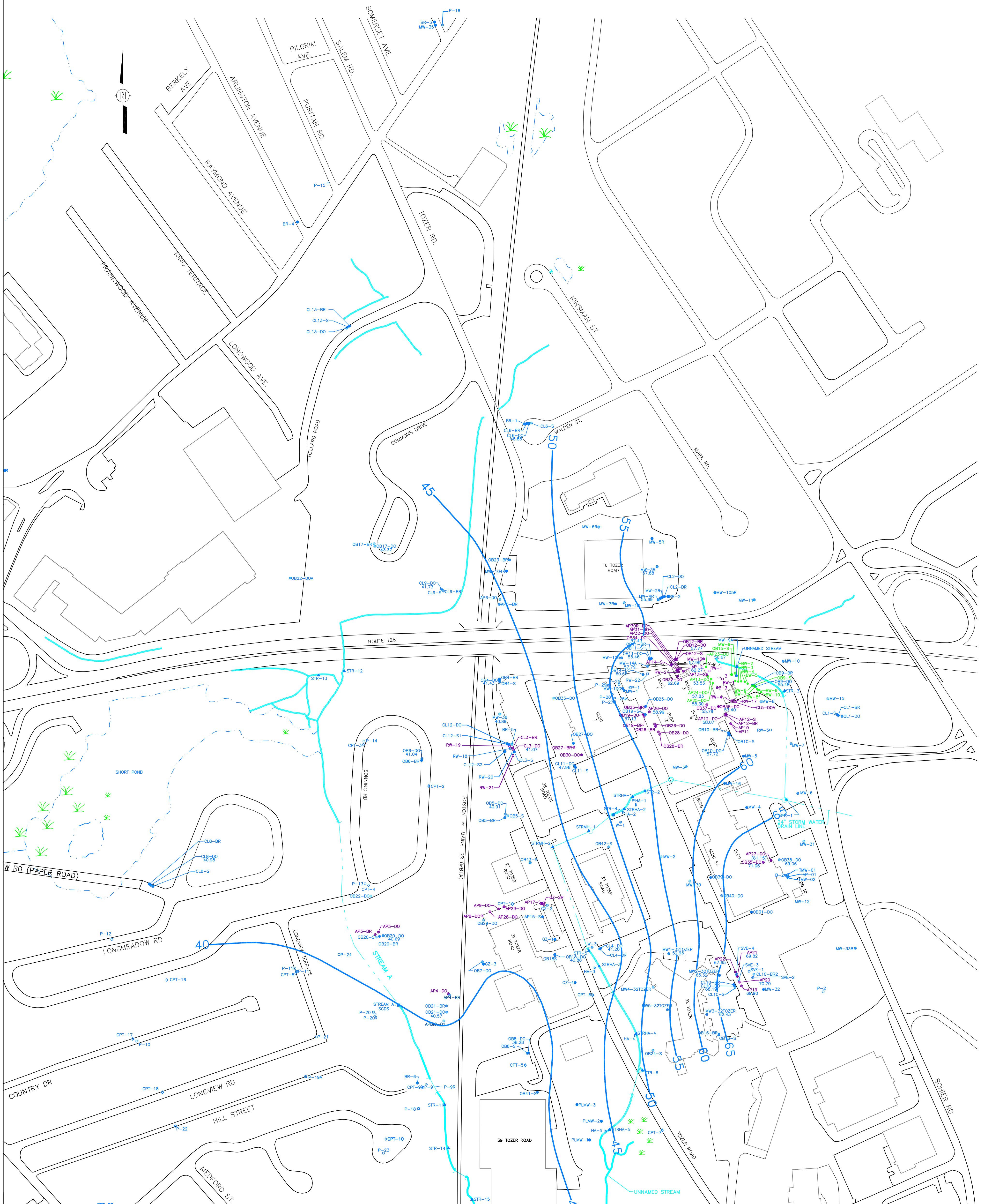
PROJECT NO.: 146899

PREPARED BY:





DRAWN BY	CD	CHECKED BY	RC	10/18/12	DRAWING NAME
	10/18/12	APPROVED BY	RC	10/18/12	DEEPGWC-APR12



- LEGEND:**
- TEMPORARY INJECTION POINT
  - ABANDONED OR DESTROYED WELL
  - PIEZOMETER (P)
  - BENCHMARK LOCATION (MSL)
  - RECOVERY WELL (RW)
  - MONITORING WELL (MW)
  - SURFACE WATER STREAM (STR) SAMPLE LOCATION
  - CONE PENETROMETER TESTPOINT (CPT)
  - HAND AUGER SAMPLE LOCATION (HA) ADJACENT TO A STREAM (STRHA)
  - BIOREMEDIATION INJECTION WELLS INJECTION LOCATIONS SHOWN IN GREEN
  - SHALLOW BIOREMEDIATION BARRIER WELL (BW)
  - MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT
  - APPROXIMATE BUILDING LOCATION
  - APPROXIMATE DRAIN MANHOLE LOCATION
  - APPROXIMATE LOCATION OF STREAM IN CULVERT
  - APPROXIMATE STREAM LOCATION
  - WATER AND MARSH AREA

**OB18-DO** - WELL IDENTIFICATION  
 - GROUNDWATER ELEVATION - ELEVATION IN FEET  
 - GAUGING DATES 04/02/2012 THROUGH 04/06/2012  
 - DASHED WHERE INFERRED  
 - ( ) NOT USED IN CONTOURING

**PAST AND CURRENT PERMANGANATE INJECTION WELLS SHOWN IN PURPLE**

**CL-9** CLUSTER WELL NUMBER  
 S=SHALLOW BR=BEDROCK  
 DO=DEEP OVERBURDEN

**STR-6** STREAM SAMPLE LOCATION NUMBER  
**STRHA-1** STREAM/SURFACE WATER SAMPLE HAND AUGER WELL LOCATION NUMBER  
**STRMH-1** STREAM/MANHOLE LOCATION NUMBER  
**MW-5** MONITORING WELL NUMBER  
**GZ-1** MONITORING WELL NUMBER  
**PLMW-1** MONITORING WELL NUMBER  
**BR-1** BEDROCK WELL NUMBER

**STRM** MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT

**STRM** APPROXIMATE BUILDING LOCATION

**STRM** APPROXIMATE DRAIN MANHOLE LOCATION

**STRM** APPROXIMATE LOCATION OF STREAM IN CULVERT

**STRM** APPROXIMATE STREAM LOCATION

**STRM** WATER AND MARSH AREA

**SCALE IN FEET**

0 300 600

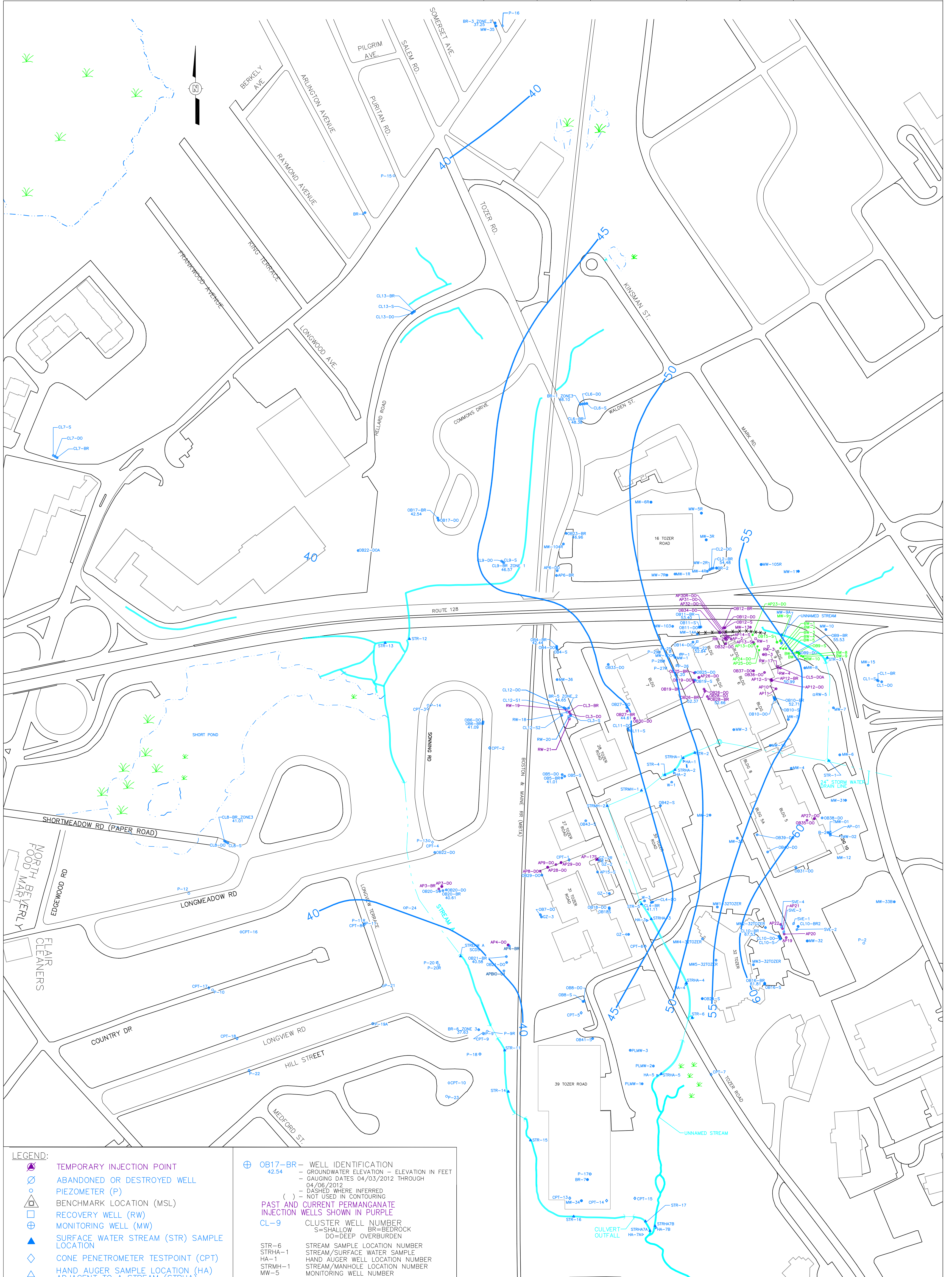
**FIGURE 6**  
**GROUNDWATER ELEVATION CONTOURS IN DEEP OVERBURDEN AQUIFER**

PREPARED FOR: VARIAN MEDICAL SYSTEMS, INC. PALO ALTO, CALIFORNIA	DRAFTED BY: CD
SCALE: 1" = 150'	PROJECT NO.: 146899
DATE: 18 OCTOBER 2012	
PREPARED BY:	





DRAWN BY	CD	CHECKED BY	RC	10/18/12	DRAWING NAME
	10/18/12	APPROVED BY	RC	10/18/12	



- LEGEND:**
- TEMPORARY INJECTION POINT
  - ABANDONED OR DESTROYED WELL
  - PIEZOMETER (P)
  - BENCHMARK LOCATION (MSL)
  - RECOVERY WELL (RW)
  - MONITORING WELL (MW)
  - SURFACE WATER STREAM (STR) SAMPLE LOCATION
  - CONE PENETROMETER TESTPOINT (CPT)
  - HAND AUGER SAMPLE LOCATION (HA) ADJACENT TO A STREAM (STRHA)
  - BIOREMEDIATION INJECTION WELLS INJECTION LOCATIONS SHOWN IN GREEN
  - SHALLOW BIOREMEDIATION BARRIER WELL (BW)
  - MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT
  - APPROXIMATE BUILDING LOCATION
  - APPROXIMATE DRAIN MANHOLE LOCATION
  - APPROXIMATE LOCATION OF STREAM IN CULVERT
  - APPROXIMATE STREAM LOCATION
  - WATER AND MARSH AREA

**OB17-BR-42.54** - WELL IDENTIFICATION  
 - GROUNDWATER ELEVATION - ELEVATION IN FEET  
 - GAUGING DATES 04/03/2012 THROUGH 04/06/2012  
 - DASHED WHERE INFERRED  
 - NOT USED IN CONTOURING

**PAST AND CURRENT PERMANGANATE INJECTION WELLS SHOWN IN PURPLE**

**CL-9** CLUSTER WELL NUMBER  
 S=SHALLOW BR=BEDROCK DO=DEEP OVERBURDEN

**STR-6** STREAM SAMPLE LOCATION NUMBER  
**STRHA-1** STREAM/SURFACE WATER SAMPLE HAND AUGER WELL LOCATION NUMBER  
**HA-1** STREAM/MANHOLE LOCATION NUMBER  
**STRMH-1** MONITORING WELL NUMBER  
**MW-5** MONITORING WELL NUMBER  
**GZ-1** MONITORING WELL NUMBER  
**PLMW-1** MONITORING WELL NUMBER  
**BR-1** BEDROCK WELL NUMBER

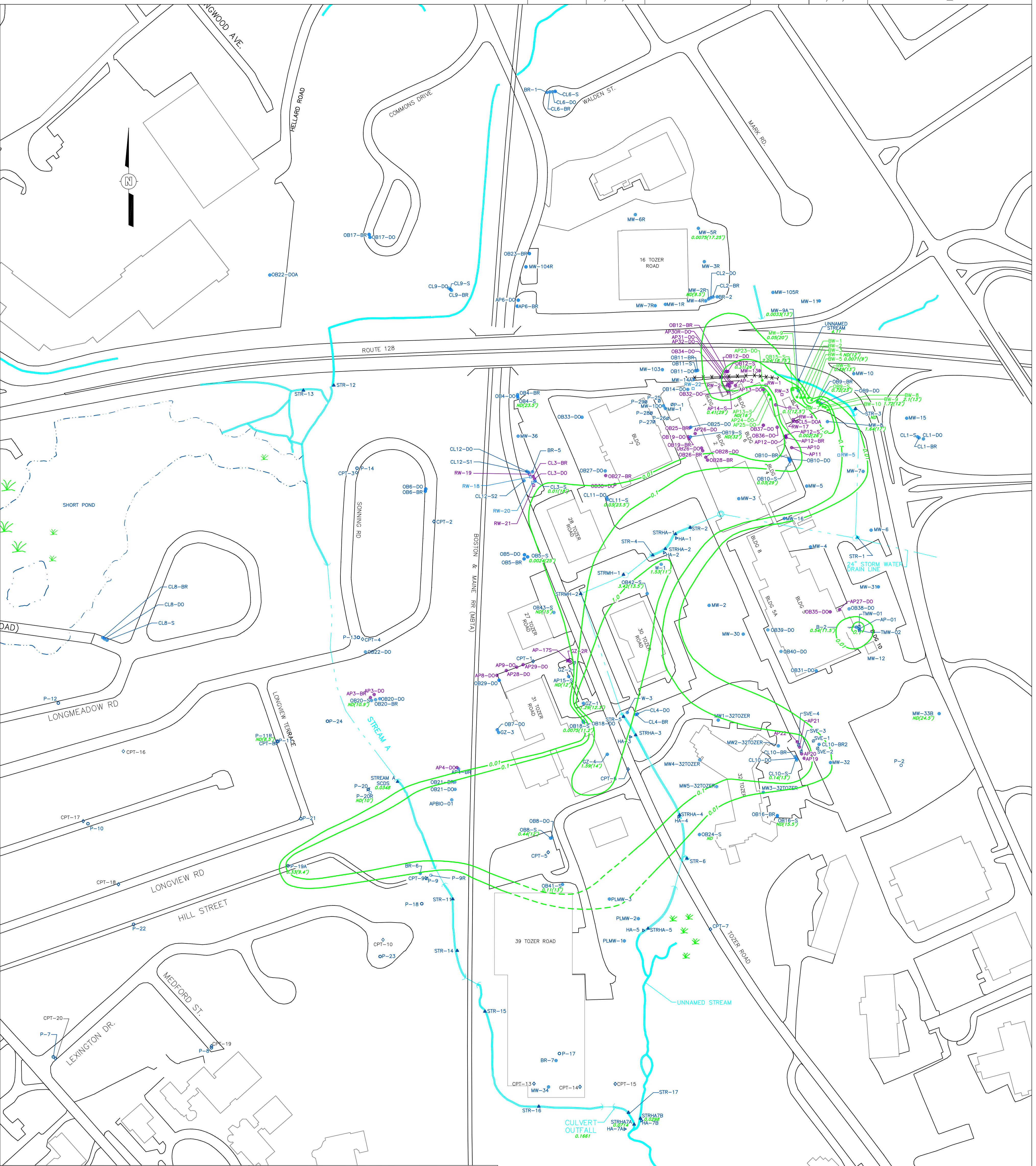
**BEDROCK WELLS BR-1 THROUGH BR-8 AND CL9-BR HAVE MULTILEVEL GROUNDWATER MONITORING SYSTEMS PRESENT WITHIN THE BEDROCK. ZONE 1 REFERS TO THE DEEPEST SAMPLING ZONE, ZONE 2 REFERS TO THE MIDDLE SAMPLING INTERVAL, AND ZONE 3 CLOSEST TO THE GROUND SURFACE. THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JUNE 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004, JULY 2012, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY SHAW ENVIRONMENTAL.**

FIGURE 7  
 GROUNDWATER ELEVATION CONTOURS  
 IN BEDROCK AQUIFER

PREPARED FOR: VARIAN MEDICAL SYSTEMS, INC. PALO ALTO, CALIFORNIA	
SCALE: 1" = 170'	DRAFTED BY: CD
DATE: 18 OCTOBER 2012	PROJECT NO.: 146899
PREPARED BY:	



DRAWN BY	CD	CHECKED BY	RC	10/18/12	DRAWING NAME
	10/18/12	APPROVED BY	RC	10/18/12	SH_VOC-APR12



- LEGEND:**
- TEMPORARY INJECTION POINT
  - ABANDONED OR DESTROYED WELL
  - PIEZOMETER (P)
  - BENCHMARK LOCATION (MSL)
  - RECOVERY WELL (RW)
  - MONITORING WELL (MW)
  - SURFACE WATER STREAM (STR) SAMPLE LOCATION
  - CONE PENETROMETER TESTPOINT (CPT)
  - HAND AUGER SAMPLE LOCATION (HA) ADJACENT TO A STREAM (STRHA)
  - BIOREMEDIATION INJECTION WELLS INJECTION LOCATIONS SHOWN IN GREEN
  - SHALLOW BIOREMEDIATION BARRIER WELL (BW)
  - STRMH MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT
  - APPROXIMATE BUILDING LOCATION
  - APPROXIMATE DRAIN MANHOLE LOCATION
  - APPROXIMATE LOCATION OF STREAM IN CULVERT
  - APPROXIMATE STREAM LOCATION
  - WATER AND MARSH AREA
  - CL-9 CLUSTER WELL NUMBER S=SHALLOW DO=DEEP OVERBURDEN BR=BEDROCK
  - STR-6 STREAM SAMPLE LOCATION NUMBER STRHA-1 STREAM/SURFACE WATER SAMPLE LOCATION
  - STRMH-1 STREAM/MANHOLE LOCATION NUMBER
  - MW-5 MONITORING WELL NUMBER
  - GZ-1 MONITORING WELL NUMBER
  - PLMW-1 MONITORING WELL NUMBER
  - BR-1 BEDROCK WELL NUMBER

**ND** NON DETECT

**1.0** TOTAL VOLATILE ORGANIC COMPOUND (VOC) ISOCONCENTRATION CONTOUR IN MILLIGRAMS PER LITER (mg/L) THIS IS GRAPHICAL REPRESENTATION OF TOTAL VOC CONCENTRATIONS

**---** DASHING INDICATES AN INFERRED CONTOUR

**CL10-S** - WELL IDENTIFICATION  
**0.14(13')** - TOTAL VOC CONCENTRATIONS (mg/L) (SAMPLE DEPTH BELOW GRADE IN FT.)

SAMPLE DATES 04/04/12 THROUGH 04/06/12

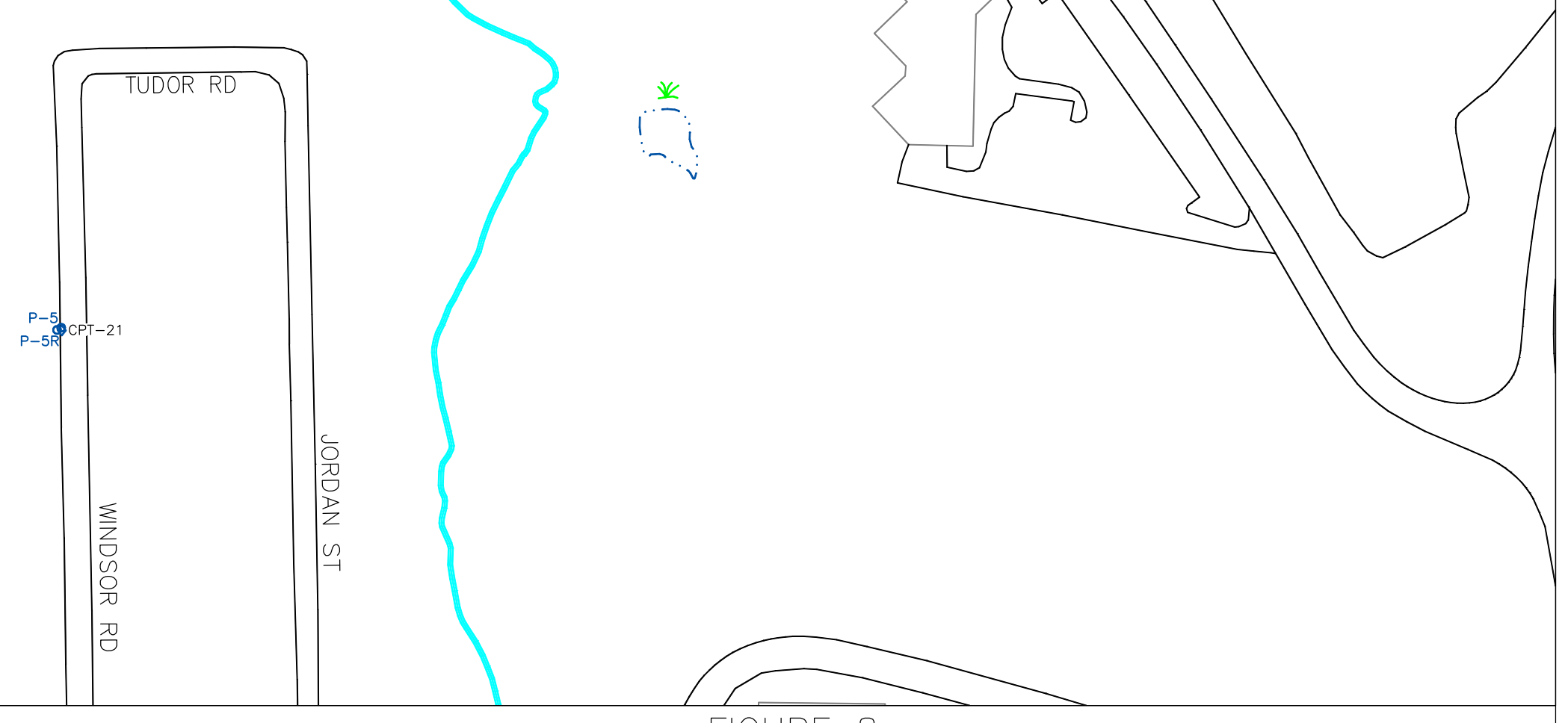
PAST AND CURRENT PERMANGANATE INJECTION WELLS SHOWN IN PURPLE

NOTE:  
 1) CONTOURS WERE DEVELOPED USING TOTAL VOC CONCENTRATION DETECTED AT EACH WELL. VOCs TOTALED INCLUDED THE FOLLOWING SITE-RELATED CHEMICALS: TRICHLOROETHENE, TETRACHLOROETHENE, 1,1,1-TRICHLOROETHANE, CIS-1,2-DICHLOROETHENE, TRANS-1,2-DICHLOROETHENE, 1,1-DICHLOROETHANE, 1,1-DICHLOROETHENE, 1,2-DICHLOROETHANE AND VINYL CHLORIDE.  
 2) DATA USED TO ESTIMATE VOC CONCENTRATIONS IN GROUNDWATER ARE FROM SAMPLE DATES NOTED ABOVE, WITH THE FOLLOWING EXCEPTIONS: - DATA FOR "CPT" POINTS WAS COLLECTED DURING SURVEYS CONDUCTED IN AUGUST-SEPTEMBER 1996 AND APRIL-MAY 1998. AT WELLS NOT SAMPLED IN APRIL 2011, DATA FROM THE MOST RECENT MONITORING WAS USED. RESULTS OF SURFACE WATER SAMPLES WERE NOT CONSIDERED IN ESTIMATING VOC DISTRIBUTION.

BEDROCK WELLS BR-1 THROUGH BR-8 AND CL9-BR HAVE MULTILEVEL GROUNDWATER MONITORING SYSTEMS PRESENT WITHIN THE BEDROCK. ZONE 1 REFERS TO THE DEEPEST SAMPLING ZONE, ZONE 2 REFERS TO THE MIDDLE SAMPLING INTERVAL, AND ZONE 3 CLOSEST TO THE GROUND SURFACE.

THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JUNE 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004, JULY 2012, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY SHAW ENVIRONMENTAL.

SCALE IN FEET

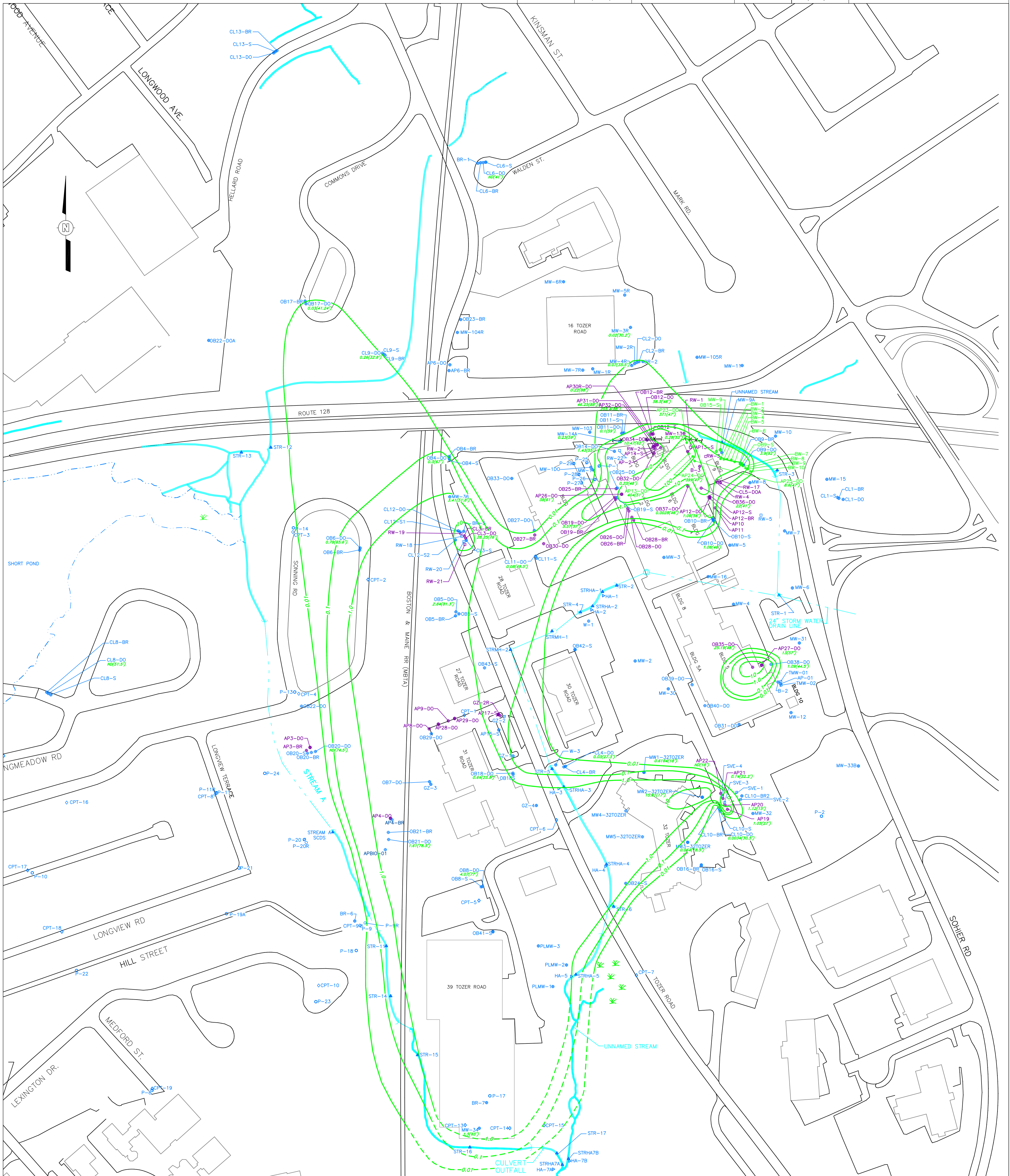


**FIGURE 8**  
 ESTIMATED DISTRIBUTION OF TOTAL VOC CONCENTRATIONS  
 IN SHALLOW OVERBURDEN AQUIFER

PREPARED FOR: VARIAN MEDICAL SYSTEMS, INC. PALO ALTO, CALIFORNIA		DRAFTED BY: CD
SCALE: 1" = 150'	DATE: 17 OCTOBER 2012	PROJECT NO.: 146899
PREPARED BY:		



DRAWN BY	CD	CHECKED BY	RC	10/17/12	DRAWING NAME
	10/17/12			APPROVED BY	



**LEGEND:**

- TEMPORARY INJECTION POINT
- ABANDONED OR DESTROYED WELL
- PIEZOMETER (P)
- BENCHMARK LOCATION (MSL)
- RECOVERY WELL (RW)
- MONITORING WELL (MW)
- SURFACE WATER STREAM (STR) SAMPLE LOCATION
- CONE PENETROMETER TESTPOINT (CPT)
- HAND AUGER SAMPLE LOCATION (HA) ADJACENT TO A STREAM (STRHA)
- BIOREMEDIATION INJECTION WELLS
- INJECTION LOCATIONS SHOWN IN GREEN
- SHALLOW BIOREMEDIATION BARRIER WELL (BW)
- STRMH MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT
- APPROXIMATE BUILDING LOCATION
- APPROXIMATE DRAIN MANHOLE LOCATION
- APPROXIMATE LOCATION OF STREAM IN CULVERT
- APPROXIMATE STREAM LOCATION
- WATER AND MARSH AREA
- CL-9 CLUSTER WELL NUMBER
- S=SHALLOW
- DO=DEEP OVERBURDEN
- BR=BEDROCK

**ND** NON DETECT

**1.0** TOTAL VOLATILE ORGANIC COMPOUND (VOC) ISOCONCENTRATION CONTOUR IN MILLIGRAMS PER LITER (mg/L)  
 THIS IS A GRAPHICAL REPRESENTATION OF TOTAL VOC CONCENTRATIONS

**CL4-DO** WELL IDENTIFICATION  
 0.03(27.3') TOTAL VOC CONCENTRATION (mg/L)  
 (SAMPLE DEPTH BELOW GRADE IN FEET)  
 (NA) SAMPLE NOT COLLECTED AT DISCRETE DEPTH (E.G. GRAB SAMPLE COLLECTED FOLLOWING WELL PURGING IN LIEU OF PDB SAMPLER)

SAMPLE DATES 04/04/12 THROUGH 04/06/12  
**PAST AND CURRENT PERMANGANATE INJECTION WELLS SHOWN IN PURPLE**

**NOTE:**  
 1) CONTOURS WERE DEVELOPED USING TOTAL VOC CONCENTRATION DETECTED AT EACH WELL. VOCs TOTALED INCLUDED THE FOLLOWING SITE-RELATED CHEMICALS: TRICHLOROETHENE, TETRACHLOROETHENE, 1,1,1-TRICHLOROETHANE, CIS-1,2-DICHLOROETHENE, TRANS-1,2-DICHLOROETHENE, 1,1-DICHLOROETHANE, 1,1-DICHLOROETHENE, 1,2-DICHLOROETHANE AND VINYL CHLORIDE.  
 2) DATA USED TO ESTIMATE VOC CONCENTRATIONS IN GROUNDWATER ARE FROM SAMPLE DATES NOTED ABOVE, WITH THE FOLLOWING EXCEPTIONS: - DATA FROM MW1-32TOZER, MW2-32TOZER, MW3-32TOZER WERE COLLECTED IN FEBRUARY 2011, DATA FOR "CPT" POINTS WAS COLLECTED DURING SURVEYS CONDUCTED IN AUGUST-SEPTEMBER 1996 AND APRIL-MAY 1998. AT WELLS NOT SAMPLED IN APRIL 2011, DATA FROM THE MOST RECENT MONITORING WAS USED.  
 BEDROCK WELLS BR-1 THROUGH BR-8 AND CL9-BR HAVE MULTILEVEL GROUNDWATER MONITORING SYSTEMS PRESENT WITHIN THE BEDROCK. ZONE 1 REFERS TO THE DEEPEST SAMPLING ZONE, ZONE 2 REFERS IS THE MIDDLE SAMPLING INTERVAL, AND ZONE 3 CLOSEST TO THE GROUND SURFACE.

THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JULY 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004, JULY 2012, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY SHAW ENVIRONMENTAL.

**SCALE IN FEET**

**FIGURE 9**  
**ESTIMATED DISTRIBUTION OF TOTAL VOC CONCENTRATIONS IN DEEP OVERBURDEN AQUIFER**

PREPARED FOR: VARIAN MEDICAL SYSTEMS, INC.  
 PALO ALTO, CALIFORNIA

SCALE: 1" = 150'

DATE: 17 OCTOBER 2012

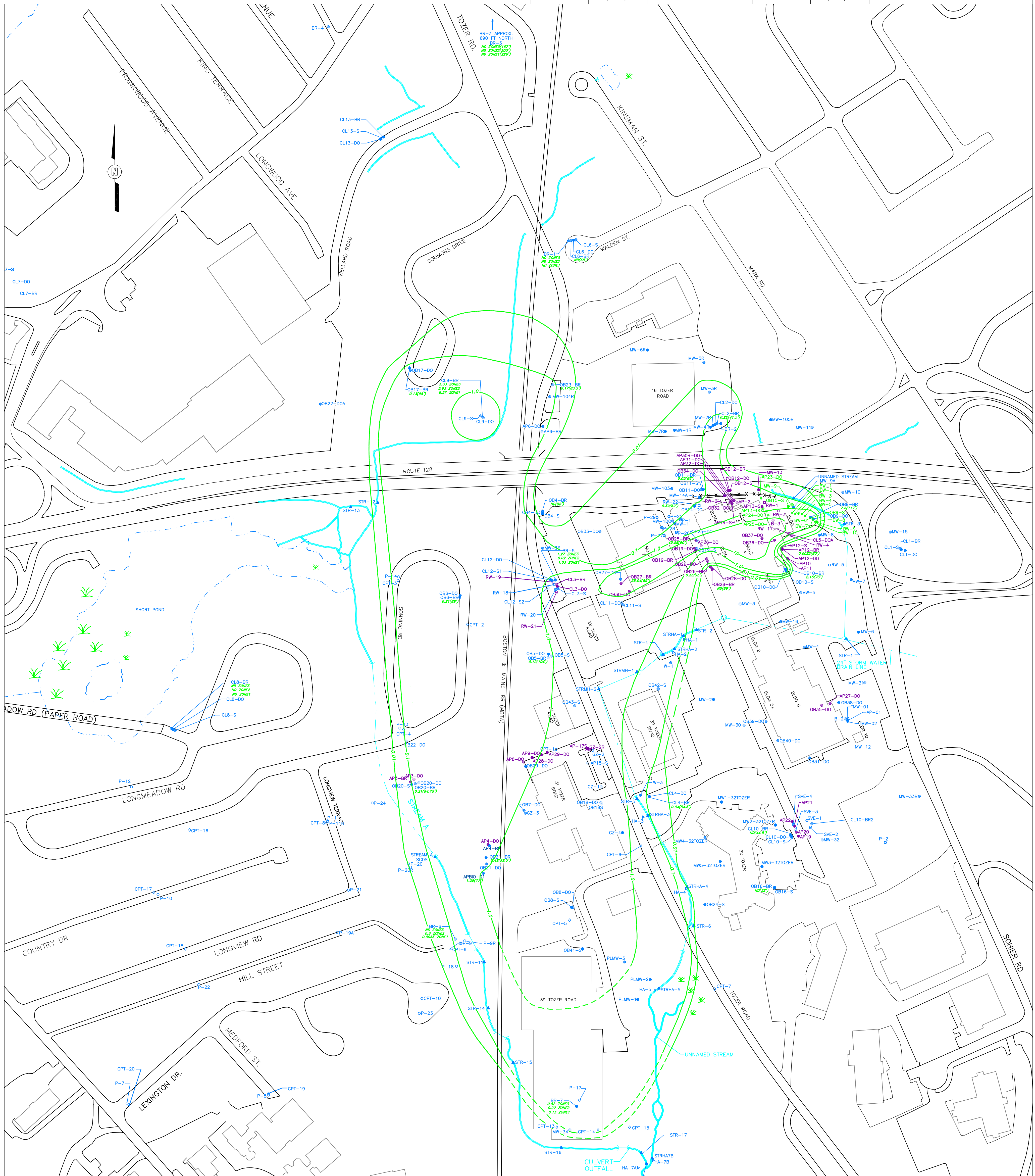
PREPARED BY:

DRAFTED BY: CD

PROJECT NO.: 146899



DRAWN BY	CD	CHECKED BY	RC	10/17/12	DRAWING NAME:
	10/17/12	APPROVED BY	RC	10/17/12	BEDROCK_VOC-APR12



**LEGEND:**

- TEMPORARY INJECTION POINT
- ABANDONED OR DESTROYED WELL
- PIEZOMETER (P)
- BENCHMARK LOCATION (MSL)
- RECOVERY WELL (RW)
- MONITORING WELL (MW)
- SURFACE WATER STREAM (STR) SAMPLE LOCATION
- CONE PENETROMETER TESTPOINT (CPT)
- HAND AUGER SAMPLE LOCATION (HA)
- ADJACENT TO A STREAM (STRHA)
- BIOREMEDIATION INJECTION WELLS
- INJECTION LOCATIONS SHOWN IN GREEN
- SHALLOW BIOREMEDIATION BARRIER WELL (BW)
- STRMH MANHOLE ACCESS TO THE STREAM LOCATED WITHIN A CULVERT
- APPROXIMATE BUILDING LOCATION
- APPROXIMATE DRAIN MANHOLE LOCATION
- APPROXIMATE LOCATION OF STREAM IN CULVERT
- APPROXIMATE STREAM LOCATION
- WATER AND MARSH AREA
- CL-9 CLUSTER WELL NUMBER  
S=SHALLOW  
DO=DEEP OVERBURDEN  
BR=BEDROCK
- STR-6 STREAM SAMPLE LOCATION NUMBER
- STRHA-1 STREAM/SURFACE WATER SAMPLE
- HA-1 HAND AUGER WELL LOCATION NUMBER
- STRMH-1 STREAM/MANHOLE LOCATION NUMBER
- MW-5 MONITORING WELL NUMBER
- GZ-1 MONITORING WELL NUMBER
- PLMW-1 MONITORING WELL NUMBER
- BR-1 BEDROCK WELL NUMBER

**ND** NON DETECT  
**1.0** TOTAL VOLATILE ORGANIC COMPOUND (VOC) ISOCONCENTRATION CONTOUR IN MILLIGRAMS PER LITER (mg/L)  
 THIS IS A GRAPHICAL REPRESENTATION OF TOTAL VOC CONCENTRATIONS  
 DASHING INDICATES AN INFERRED CONTOUR

**CL4-BR** - WELL IDENTIFICATION  
**0.04(54.5')** - TOTAL VOC CONCENTRATION (mg/L) (SAMPLE DEPTH BELOW GRADE IN FEET)  
**(NA)** - SAMPLE NOT COLLECTED AT DISCRETE DEPTH (E.G. GRAB SAMPLE COLLECTED FOLLOWING WELL PURGING IN LIEU OF PDB SAMPLER)

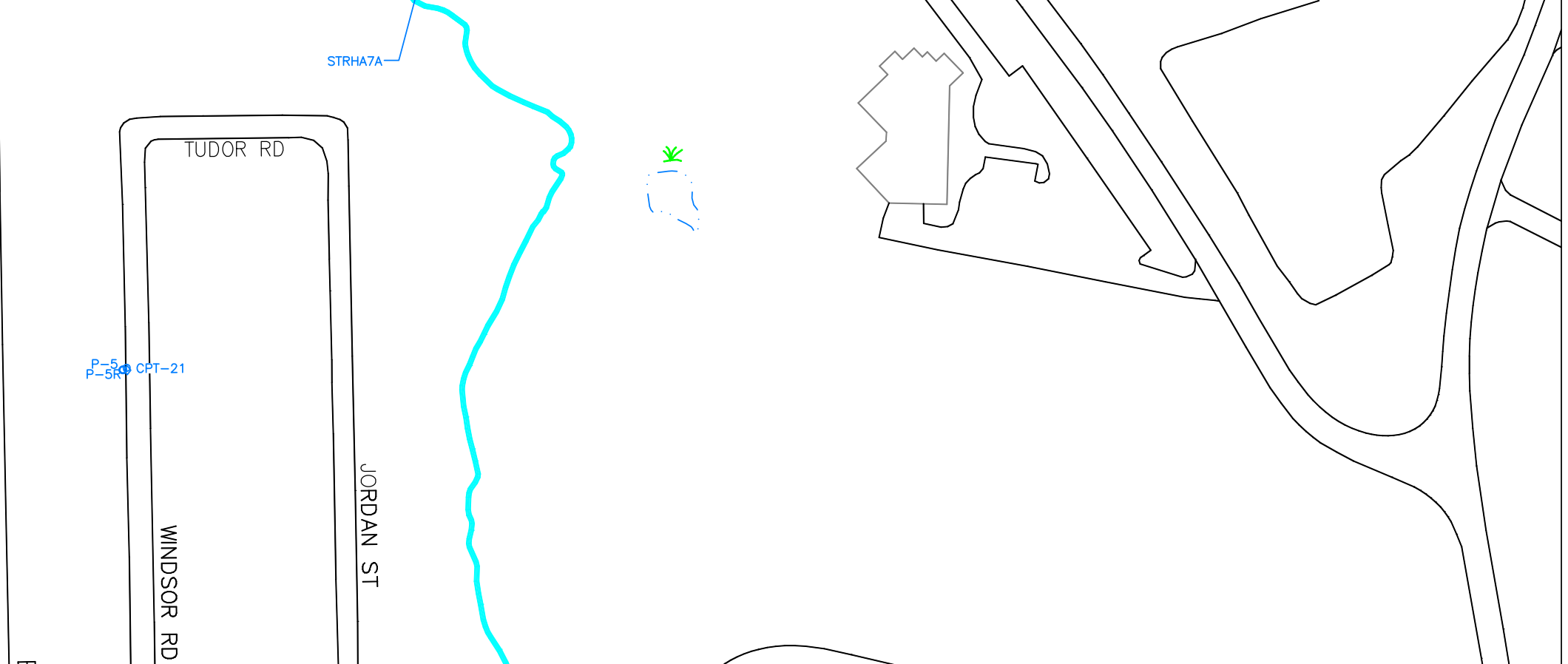
SAMPLE DATES 04/03/12 THROUGH 04/06/12  
**PAST AND CURRENT PERMANGANATE INJECTION WELLS SHOWN IN PURPLE**

**NOTE:**  
 1) CONTOURS WERE DEVELOPED USING TOTAL VOC CONCENTRATION DETECTED AT EACH WELL. VOCs TOTALED INCLUDED THE FOLLOWING SITE-RELATED CHEMICALS: TRICHLOROETHENE, TETRACHLOROETHENE, 1,1,1-TRICHLOROETHANE, CIS-1,2-DICHLOROETHENE, TRANS-1,2-DICHLOROETHENE, 1,1-DICHLOROETHANE, 1,1-DICHLOROETHENE, 1,2-DICHLOROETHANE AND VINYL CHLORIDE.  
 2) DATA USED TO ESTIMATE VOC CONCENTRATIONS IN GROUNDWATER ARE FROM SAMPLE DATES NOTED ABOVE, WITH THE FOLLOWING EXCEPTIONS: - DATA FOR "CPT" POINTS WAS COLLECTED DURING SURVEYS CONDUCTED IN AUGUST-SEPTEMBER 1996 AND APRIL-MAY 1998, AT WELLS NOT SAMPLED IN APRIL 2011, DATA FROM THE MOST RECENT MONITORING WAS USED.

BEDROCK WELLS BR-1 THROUGH BR-8 AND CL9-BR HAVE MULTILEVEL GROUNDWATER MONITORING SYSTEMS PRESENT WITHIN THE BEDROCK. ZONE 1 REFERS TO THE DEEPEST SAMPLING ZONE, ZONE 2 REFERS IS THE MIDDLE SAMPLING INTERVAL, AND ZONE 3 CLOSEST TO THE GROUND SURFACE.

THIS MAP HAS BEEN COMPILED FROM SURVEY DATA COLLECTED IN JULY 1994, MARCH 1995, OCTOBER 1995, SEPTEMBER 1996, MARCH 1997, DECEMBER 1997, SEPTEMBER 1998, JANUARY 2000, FEBRUARY 2001, JULY 2002, SEPTEMBER 2002, JULY 2003, FEBRUARY 2004, OCTOBER 2004, JULY 2012, FROM VARIOUS EXISTING PLANS, AND OBSERVATIONS MADE IN THE FIELD BY SHAW ENVIRONMENTAL.

**SCALE IN FEET**  
 0 300 600



**FIGURE 10**  
**ESTIMATED DISTRIBUTION OF TOTAL VOC CONCENTRATIONS**  
**IN BEDROCK AQUIFER APRIL**

PREPARED FOR: VARIAN MEDICAL SYSTEMS, INC.  
 PALO ALTO, CALIFORNIA

SCALE: 1" = 150'

DATE: 17 OCTOBER 2012

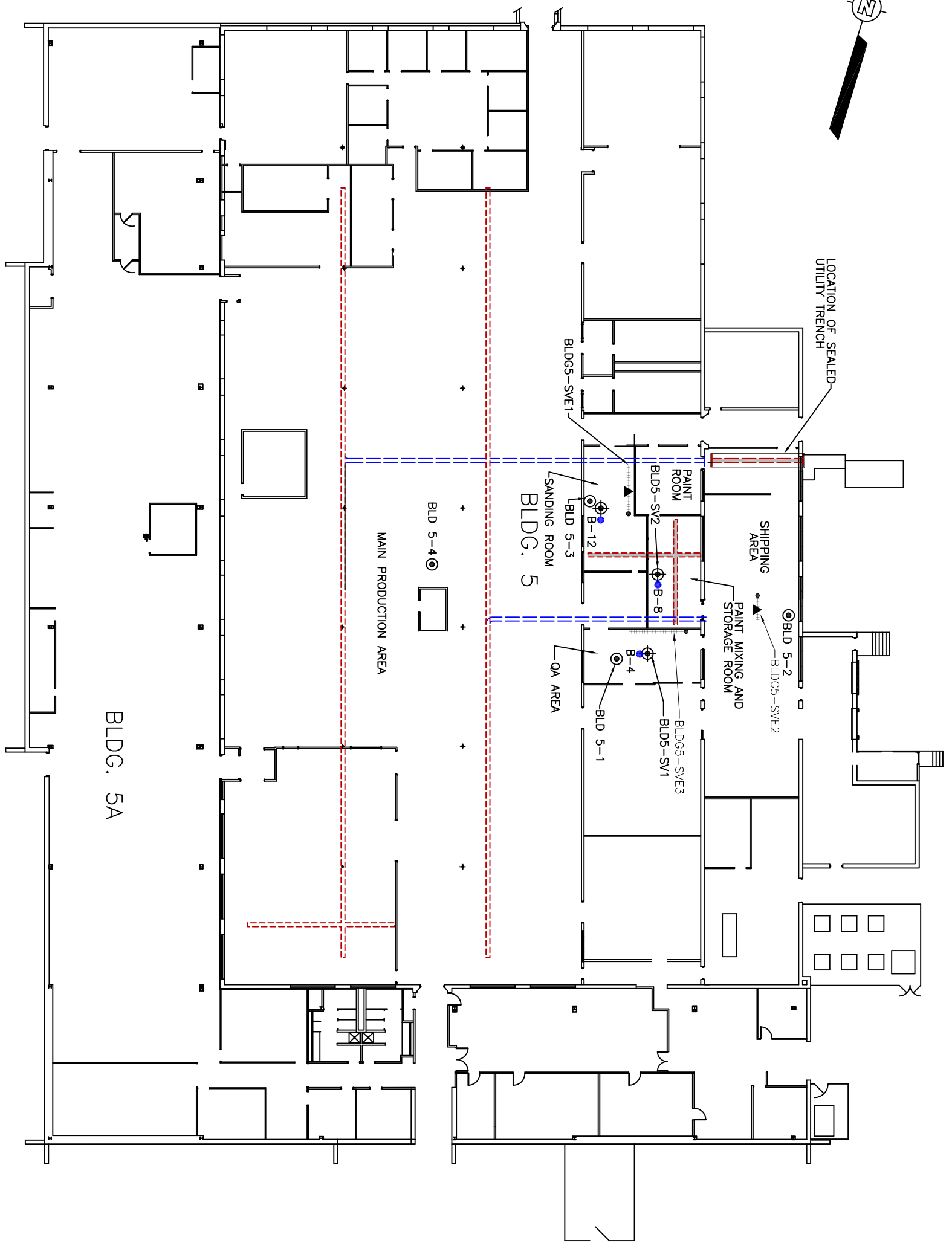
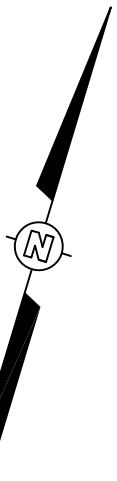
PREPARED BY:

DRAFTED BY: CD

PROJECT NO.: 146899



OFFICE	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
CANTON, MA	CD	10/22/12	PH	10/22/12
			--	--



REFERENCE:  
 PLAN DERIVED FROM COMMUNICATIONS & POWER INDUSTRIES  
 MAP, DATED 07/11/03, CLEAN HARBORS ENVIRONMENTAL  
 SERVICES, INC. MAP TITLED "1962-BUILDING 5", AND SHAW  
 ENVIRONMENTAL FIELD RECONNAISSANCE.

LEGEND	
	SUB-SLAB SOIL VAPOR SAMPLE LOCATION
	INDOOR AIR SAMPLE LOCATION
	1995 SUB-SLAB SOIL VAPOR SAMPLE LOCATION
	SOIL SAMPLE (COLLECTED FROM CENTER OF TRENCH 1 (STANDING ROOM) AND TRENCH 2 (SHIPPING))
	FORMER UTILITY TRENCH FILLED WITH CONCRETE
	UTILITY TRENCH BENEATH CONCRETE FLOOR
	UTILITY TRENCH (COVERED WITH STEEL PLATE)
	SVE TRENCH WELL
	INDOOR AIR SAMPLE ID RTN 3-0485
	ROOM
	BLD 5-1 FINAL INSPECTION ROOM
	BLD 5-2 SHIPPING
	BLD 5-3 SAND BLASTING ROOM
	BLD 5-4 PRODUCTION AREA

**Shaw Environmental & Infrastructure, Inc.**  
 150 ROYALL STREET  
 CANTON, MASSACHUSETTS

FIGURE 11  
 BUILDING 5 PLAN  
 FORMER VARIAN FACILITY  
 150 SCHIER ROAD  
 BEVERLY, MASSACHUSETTS

**APPENDIX A**

**MADEP COMPREHENSIVE RESPONSE ACTION  
TRANSMITTAL FORM (BWSC108) AND  
REMEDIAL MONITORING REPORT (RMR) CHECKLIST**



**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL  
FORM & PHASE I COMPLETION STATEMENT**

Release Tracking Number

3 - 485

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

**A. SITE LOCATION:**

1. Site Name: **VARIAN-MICROWAVE DIV**

2. Street Address: **150 SOHIER RD**

3. City/Town: **BEVERLY** 4. ZIP Code: **019150000**

5. Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.

- a. Tier IA
- b. Tier IB
- c. Tier IC
- d. Tier II

6. If applicable, provide the Permit Number: **P23730**

**B. THIS FORM IS BEING USED** (check all that apply)

- 1. Submit a **Phase I Completion Statement**, pursuant to 310 CMR 40.0484.
- 2. Submit a **Revised Phase I Completion Statement**, pursuant to 310 CMR 40.0484.
- 3. Submit a **Phase II Scope of Work**, pursuant to 310 CMR 40.0834.
- 4. Submit an **interim Phase II Report**. This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.
- 5. Submit a **final Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.
- 6. Submit a **Revised Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.
- 7. Submit a **Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.
- 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.
- 9. Submit a **Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.
- 10. Submit a **Modified Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.
- 11. Submit an **As-Built Construction Report**, pursuant to 310 CMR 40.0875.
- 12. Submit a **Phase IV Status Report**, pursuant to 310 CMR 40.0877.
- 13. Submit a **Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

- a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Response Action Outcome.
- b. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
- c. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) has been or will be submitted to DEP.
- d. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) has been or will be submitted to DEP.



**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL  
FORM & PHASE I COMPLETION STATEMENT**

Release Tracking Number

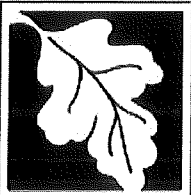
3 - 485

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

**B. THIS FORM IS BEING USED TO (cont.):**(check all that apply)

14. Submit a **Revised Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.
15. Submit a **Phase V Status Report**, pursuant to 310 CMR 40.0892.
16. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP.)
- a. Type of Report: (check one)     i. Initial Report     ii. Interim Report     iii. Final Report
- b. Frequency of Submittal: (check all that apply)
- i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.
- ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.
- iii. A Remedial Monitoring Report(s) submitted concurrent with a Status Report.
- c. Status of Site: (check one)     i. Phase IV     ii. Phase V     iii. Remedy Operation Status     iv. Class C RAO
- d. Number of Remedial Systems and/or Monitoring Programs:
- A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.
17. Submit a **Remedy Operation Status**, pursuant to 310 CMR 40.0893.
18. Submit a **Status Report to maintain a Remedy Operation Status**, pursuant to 310 CMR 40.0893(2).
19. Submit a **Transfer and/or a Modification of Persons Maintaining a Remedy Operation Status (ROS)**, pursuant to 310 CMR 40.0893(5) (check one, or both, if applicable).
- a. Submit a Transfer of Persons Maintaining an ROS (the transferee should be the person listed in Section D, "Person Undertaking Response Actions").
- b. Submit a Modification of Persons Maintaining an ROS (the primary representative should be the person listed in Section D, "Person Undertaking Response Actions").
- c. Number of Persons Maintaining an ROS not including the primary representative: \_\_\_\_\_
20. Submit a **Termination of a Remedy Operation Status**, pursuant to 310 CMR 40.0893(6).(check one)
- a. Submit a notice indicating ROS performance standards have not been met. A plan and timetable pursuant to 310 CMR 40.0893(6)(b) for resuming the ROS are attached.
- b. Submit a notice of Termination of ROS.
21. Submit a **Phase V Completion Statement**, pursuant to 310 CMR 40.0894.
- Specify the outcome of Phase V activities: (check one)
- a. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement (BWSC104) will be submitted to DEP.
- b. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
- c. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and/or that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.
22. Submit a **Revised Phase V Completion Statement**, pursuant to 310 CMR 40.0894.
23. Submit a **Post-Class C Response Action Outcome Status Report**, pursuant to 310 CMR 40.0898.





COMPREHENSIVE RESPONSE ACTION TRANSMITTAL  
FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

3 - 485

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

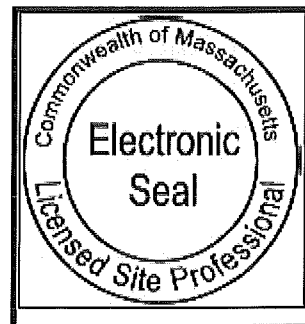
> if Section B indicates that a **Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement** and/or a **Termination of a Remedy Operation Status** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

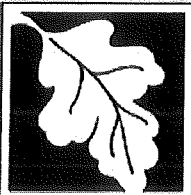
> if Section B indicates that a **Phase II Scope of Work** or a **Phase IV Remedy Implementation Plan** is being submitted, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> if Section B indicates that an **As-Built Construction Report**, a **Remedy Operation Status**, a **Phase IV, Phase V or Post-Class C RAO Status Report**, a **Status Report to Maintain a Remedy Operation Status**, a **Transfer or Modification of Persons Maintaining a Remedy Operation Status** and/or a **Remedial Monitoring Report** is being submitted, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

- 1. LSP #: 9070
- 2. First Name: TIMOTHY W
- 3. Last Name: KEMPER
- 4. Telephone: 6175896162
- 5. Ext.:
- 6. FAX: 6175892223
- 7. Signature: Timothy W Kemper
- 8. Date: 11/1/2012  
(mm/dd/yyyy)
- 9. LSP Stamp:





COMPREHENSIVE RESPONSE ACTION TRANSMITTAL  
FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number

3 - 485

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply:  a. change in contact name  b. change of address  c. change in the person undertaking response actions

2. Name of Organization: **VARIAN MEDICAL SYSTEMS INC**

3. Contact First Name: **JOHN R** 4. Last Name: **BUCHANAN**

5. Street: **3120 HANSEN WAY M/S G-100** 6. Title: **MANAGER OF ENVIRONMENTAL AFFAIRS**

7. City/Town: **PALO ALTO** 8. State: **CA** 9. ZIP Code: **943041030**

10. Telephone: **6504246103** 11. Ext.:  12. FAX:

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS:  Check here to change relationship

1. RP or PRP  a. Owner  b. Operator  c. Generator  d. Transporter  
 e. Other RP or PRP Specify: **OTHER PRPS**

2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

4. Any Other Person Undertaking Response Actions Specify Relationship:

F. REQUIRED ATTACHMENT AND SUBMITTALS:

1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.

3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.

4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.

5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.

6. If submitting a Transfer of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for the person making this submittal (transferee) is attached.

7. If submitting a Modification of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for each new person making this submittal is attached.

8. Check here if any non-updatable information provided on this form is incorrect, e.g. Site Name. Send corrections to: BWSC.eDEP@state.ma.us.

9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.



**COMPREHENSIVE RESPONSE ACTION TRANSMITTAL  
FORM & PHASE I COMPLETION STATEMENT**

Release Tracking Number

3 - 485

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

**G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:**

1. I, **John R Buchanan**, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

>if Section B indicates that this is a **Modification of a Remedy Operation Status (ROS)**, I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all persons performing response actions under the ROS as stated in 310 CMR 40.0893(5)(d) to receive oral and written correspondence from MassDEP with respect to performance of response actions under the ROS, and to receive a statement of fee amount as per 4.03(3).

I understand that any material received by the Primary Representative from MassDEP shall be deemed received by all the persons performing response actions under the ROS, and I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

2. By: **John R Buchanan** 3. Title: **MANAGER OF ENVIRONMENT**

Signature

4. For: **VARIAN MEDICAL SYSTEMS INC** 5. Date: **11/1/2012**

(Name of person or entity recorded in Section D)

(mm/dd/yyyy)

6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street: \_\_\_\_\_

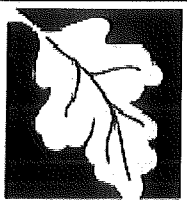
8. City/Town: \_\_\_\_\_ 9. State: \_\_\_\_\_ 10. ZIP Code: \_\_\_\_\_

11. Telephone: \_\_\_\_\_ 12. Ext.: \_\_\_\_\_ 13. FAX: \_\_\_\_\_

**YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO \$10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.**

Date Stamp (DEP USE ONLY:)

**Received by DEP on  
11/1/2012 2:04:42 PM**



**CRA REMEDIAL MONITORING REPORT**

Release Tracking Number

Pursuant to 310 CMR 40.0800 (SUBPART H)

3 - 485

Remedial System or Monitoring Program: 1 of 1

**A. DESCRIPTION OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM:**

1. Type of Active Remedial System or Active Remedial Monitoring Program: (check all that apply)

- a. Active Remedial System: (check all that apply)
  - i. NAPL Recovery
  - ii. Soil Vapor Extraction/Bioventing
  - iii. Vapor-phase Carbon Adsorption
  - iv. Groundwater Recovery
  - v. Dual/Multi-phase Extraction
  - vi. Aqueous-phase Carbon Adsorption
  - vii. Air Stripping
  - viii. Sparging/Biosparging
  - ix. Cat/Thermal Oxidation
  - x. Other Describe: \_\_\_\_\_
- b. Application of Remedial Additives: (check all that apply)
  - i. To the Subsurface
  - ii. To Groundwater (Injection)
  - iii. To the Surface
- c. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section F5)
  - i. Reactive Wall
  - ii. Natural Attenuation
  - iii. Other Describe: \_\_\_\_\_

2. Mode of Operation: (check one)

- a. Continuous
- b. Intermittent
- c. Pulsed
- d. One-time Event Only
- e. Other: \_\_\_\_\_

3. System Effluent/Discharge: (check all that apply)

- a. Sanitary Sewer/POTW
- b. Groundwater Re-infiltration/Re-injection: (check one)
  - i. Downgradient
  - ii. Upgradient
- c. Vapor-phase Discharge to Ambient Air: (check one)
  - i. Off-gas Controls
  - ii. No Off-gas Controls
- d. Drinking Water Supply
- e. Surface Water (including Storm Drains)
- f. Other Describe: **NOT APPLICABLE**

**B. MONITORING FREQUENCY:**

1. Reporting period that is the subject of this submittal: From: 4/1/2012 To: 9/30/2012  
(mm/dd/yyyy) (mm/dd/yyyy)

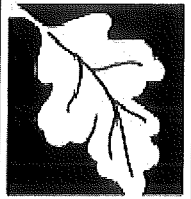
2. Number of monitoring events during the reporting period: (check one)

- a. System Startup: (if applicable)
  - i. Days 1, 3, 6, and then weekly thereafter, for the first month.
  - ii. Other Describe: \_\_\_\_\_
- b. Post-system Startup (after first month) or Monitoring Program:
  - i. Monthly
  - ii. Quarterly
  - iii. Other Describe: **BI-WEEKLY**

3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

**C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)**

- 1. NPDES: (check one)
  - a. Remediation General Permit
  - b. Individual Permit
  - c. Emergency Exclusion
 Effective Date of Permit: \_\_\_\_\_  
(mm/dd/yyyy)
- 2. MCP Performance Standard MCP Citations(s): \_\_\_\_\_
- 3. DEP Approval Letter Date of Letter: \_\_\_\_\_  
(mm/dd/yyyy)
- 4. Other Describe: **NOT APPLICABLE**



**CRA REMEDIAL MONITORING REPORT**

Pursuant to 310 CMR 40.0800 (SUBPART H)

Remedial System or Monitoring Program:  of:

Release Tracking Number

-

**D. WASTEWATER TREATMENT PLANT OPERATOR:** (check one)

- 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.
  - a. Name:
  - b. Grade:
  - c. License No.:
  - d. License Exp. Date:  (mm/dd/yyyy)
- 2. Not Required
- 3. Not Applicable

**E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD:**

(check all that apply)

- 1. The Active Remedial System was functional one or more days during the Reporting Period.
  - a. Days System was Fully Functional:
  - b. GW Recovered (gals):
  - c. NAPL Recovered (gals):
  - d. GW Discharged (gals):
  - e. Avg. Soil Gas Recovery Rate (scfm):
  - f. Avg. Sparging Rate (scfm):

2. Remedial Additives: (check all that apply)

- a. No Remedial Additives applied during the Reporting Period.
- b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

ii. Peroxides:

Name of Additive	Date	Quantity	Units

iii. Microorganisms:

Name of Additive	Date	Quantity	Units

iv. Other:

Name of Additive	Date	Quantity	Units
<b>EMULSIFIED VEGETA</b>	7/10/2012	<b>3095</b>	<b>GALS</b>

c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

i. Permanganates:

Name of Additive	Date	Quantity	Units
<b>SODIUM PERMANGANAT</b>	7/25/2012	<b>1806.75</b>	<b>GALS</b>

ii. Peroxides:

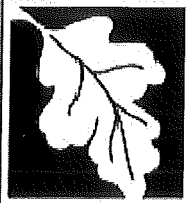
Name of Additive	Date	Quantity	Units

iii. Persulfates:

Name of Additive	Date	Quantity	Units

iv. Other:

Name of Additive	Date	Quantity	Units



**CRA REMEDIAL MONITORING REPORT**

Release Tracking Number

Pursuant to 310 CMR 40.0800 (SUBPART H)

**3** - **485**

Remedial System or Monitoring Program: **1** of **1**

**E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)**  
 (check all that apply)

d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units

Name of Additive	Date	Quantity	Units

e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

**F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)**

1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: \_\_\_\_\_ b. Total Number of Days of Unscheduled Shutdowns: \_\_\_\_\_

c. Reason(s) for Unscheduled Shutdowns: \_\_\_\_\_

2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns:  b. Total Number of Days of Scheduled Shutdowns:

c. Reason(s) for Scheduled Shutdowns:

3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown:   
 (mm/dd/yyyy)

b. No Further Effluent Discharges.

c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

d. No Further Submittals Planned.

e. Other: Describe:

**G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)**

1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

**Attachment to BWSC 108  
150 Sohier Road, Beverly, MA  
RTN 3-0485**

Approvals from the Massachusetts Department of Environmental that this submittal is subject to include:

- “Approval to Apply Remedial Additive; MGL.c.21E & 310 CMR 40.0000” issued on August 18, 2004 (for permanganate addition activities)
- “Approval to Apply Remedial Additive; MGL.c.21E & 310 CMR 40.0000” issued on November 20, 2006 (for bioremediation activities)

**APPENDIX B**

**LABORATORY ANALYTICAL REPORTS**



## Data Usability Worksheet

**Project Name :** Varian Medical Systems, Inc  
**Prepared By:** Pernilla Haley  
**Analyte Group :** Volatile Organics

**Job Number :** 143276  
**Date :** 12/5/2011  
**Analytical Method :** TO-15

**Completed MADEP CAM Certification Form included:** Yes

**Laboratory ID No. :** R1105621

**Chain of Custody included in Data Package ?** Yes

**Is it Complete ?** Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
10/6/2011	TO-15		30 days	10/14/11, 10/17/11
10/7/2011	TO-15		30 days	10/14/11, 10/15/11, 10/17/11

**Sample temperature above QC limit:** NA

### Surrogate Recovery

Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

### MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

### Laboratory Control Samples

Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: No

**Equipment Field Blank ID :** NA  
**Trip Blank ID :** NA  
**Method Blank:** TO-15 10/14/11, 10/17/11

**Were any compounds identified in the method blank, field blank or trip blank above detection limits ?** No

**If so, list Sample ID/Compound/Concentration/Units:**

**Reviewed By:** RJC

October 26, 2011

Service Request No: R1105621

Mr. Ray Cadorette  
Shaw Environmental & Infrastructure, Inc.  
100 Technology Center  
Stoughton, MA 02072

**Laboratory Results for: Varian Beverly Air Samples/139340/143267**

Dear Mr. Cadorette:

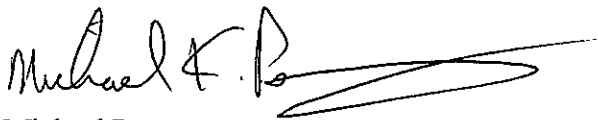
Enclosed are the results of the sample(s) submitted to our laboratory on October 10, 2011. For your reference, these analyses have been assigned our service request number **R1105621**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc.**



Michael Perry  
Laboratory Manager

Page 1 of 43

**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** Shaw E & I, Inc.  
**Project:** Varian Beverly  
**Sample Matrix:** Air

**Service Request No.:** R1105621  
**Project No.:** 143267/139340  
**Date Received:** 10/10/11

**CASE NARRATIVE**

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. This report contains analytical results for samples designated for Tier II, MASS. CAM deliverables. When appropriate to the method, blank and LCS results have been reported with each analytical test.

**Sample Receipt**

Shaw air samples were collected on 10/06/11 and 10/07/11 and received at CAS in good condition as noted on the receipt and preservation check form. The samples were stored in the laboratory at room temperature prior to analysis. See the CAS case narrative for a cross-reference between Client ID and CAS Job #.

**TO - 15 Air Analysis**

Eighteen air samples were analyzed for a site specific list of Volatile Organics by EPA method TO-15.

All samples were analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

All initial and continuing calibrations were compliant.

All surrogate standard recoveries were within QC limits.

The LCS/LCSD recoveries were all within QC limits of 70 – 130 %. All RPD data were within QC limits.

No analytical or QC problems were encountered with these analyses.

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R1105621

<u>Lab ID</u>	<u>Client ID</u>
R1105621-001	VP-3
R1105621-002	VP-5
R1105621-003	VP-6
R1105621-004	BLDG 3-3
R1105621-005	BLDG 3-2
R1105621-006	BLDG 2-6
R1105621-007	BLDG 6-SV1
R1105621-008	BDLG 6-SV2
R1105621-009	BLDG 6-SV3
R1105621-010	BLDG 6-1
R1105621-011	BLDG 6-2
R1105621-012	BLDG 5-1
R1105621-013	BLDG 5-2
R1105621-014	BLDG 5-3
R1105621-015	BLDG 5-4
R1105621-016	BLDG 5-SV1
R1105621-017	BLDG 5-SV2
R1105621-018	BLDG 5-SV3

## MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc.

Project #: 139340/143267

Project Location: Varian Beverly

RTN:

**This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):**  
R1105621-001 - 018

Matrices:  Groundwater/Surface Water  Soil/Sediment  Drinking Water  Air  Other:

**CAM Protocol** (check all that apply below):

8260 VOC CAM II A <input type="checkbox"/>	7470/7471 Hg CAM III B <input type="checkbox"/>	MassDEP VPH CAM IV A <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input checked="" type="checkbox"/>
6010 Metals CAM III A <input type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	8082 PCB CAM V A <input type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6860 Perchlorate CAM VIII B <input type="checkbox"/>	

**Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes <input type="checkbox"/> No
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes <input type="checkbox"/> No
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes <input type="checkbox"/> No
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes <input type="checkbox"/> No
<b>E</b>	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	X Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes <input type="checkbox"/> No

**Responses to Questions G, H and I below are required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes <input type="checkbox"/> No <sup>1</sup>
<p><b>Data User Note:</b> Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.</p>		
<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	X Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	X Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup>All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: 

Position: Laboratory Manager

Printed Name: Michael K. Perry

Date: 10/26/11

## REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
- H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.



**CAS/Rochester Lab ID # for Massachusetts Certification**  
M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

*The Commonwealth of Massachusetts*



*Department of Environmental Protection*

*Division of Environmental Analysis  
Senator William X. Wall Experiment Station*

*certifies*

M-NY032

COLUMBIA ANALYTICAL SERVICES  
1565 JEFFERSON RD  
BUILDING 300, SUITE 360  
ROCHESTER, NY 14623-0000

*Laboratory Director:* Michael K. Perry

*for the analysis of* NON POTABLE WATER (CHEMISTRY)

*pursuant to 310 CMR 42.00*

*This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.*

*This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.*

*Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.*

A handwritten signature in cursive script, reading "David C. Jacobs".

*Director, Division of Environmental Analysis*

*Issued:* 01 JUL 2011

*Expires:* 30 JUN 2012

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)	Effective Date	25 AUG 2011	Expiration Date	30 JUN 2012
<u>Analytes</u>			<u>Methods</u>	
ALUMINUM			EPA 200.7	
ANTIMONY			EPA 200.7	
ANTIMONY			EPA 200.8	
ARSENIC			EPA 200.7	
ARSENIC			EPA 200.8	
BERYLLIUM			EPA 200.7	
BERYLLIUM			EPA 200.8	
CADMIUM			EPA 200.7	
CADMIUM			EPA 200.8	
CHROMIUM			EPA 200.7	
CHROMIUM			EPA 200.8	
COBALT			EPA 200.7	
COBALT			EPA 200.8	
COPPER			EPA 200.7	
COPPER			EPA 200.8	
IRON			EPA 200.7	
LEAD			EPA 200.7	
LEAD			EPA 200.8	
MANGANESE			EPA 200.7	
MANGANESE			EPA 200.8	
MERCURY			EPA 245.1	
MOLYBDENUM			EPA 200.7	
MOLYBDENUM			EPA 200.8	
NICKEL			EPA 200.7	
NICKEL			EPA 200.8	
SELENIUM			EPA 200.7	
SELENIUM			EPA 200.8	
SILVER			EPA 200.7	
SILVER			EPA 200.8	
THALLIUM			EPA 200.7	
THALLIUM			EPA 200.8	
VANADIUM			EPA 200.7	
VANADIUM			EPA 200.8	
ZINC			EPA 200.7	
ZINC			EPA 200.8	
PH			SM 4500-H-B	
SPECIFIC CONDUCTIVITY			EPA 120.1	
TOTAL DISSOLVED SOLIDS			SM 2540C	
HARDNESS (CaCO3), TOTAL			SM 2340C	
CALCIUM			EPA 200.7	
MAGNESIUM			EPA 200.7	
SODIUM			EPA 200.7	
POTASSIUM			EPA 200.7	

August 24, 2011

\*= Provisional Certification

Page 1 of 2

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**COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)      Effective Date      25 AUG 2011      Expiration Date      30 JUN 2012

<u>Analytes</u>	<u>Methods</u>
ALKALINITY, TOTAL	SM 2320B
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATER)	EPA 608

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** VP-3  
**Lab Code:** R1105621-001

**Service Request:** R1105621  
**Date Collected:** 10/ 6/11 1359  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/17/11 2029  
**Canister Dilution Factor:** 2.20

Initial Pressure (psig): -1.5                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	70	14	14	6.9	6.9	U
75-01-4	Vinyl Chloride	70	1.9	1.9	0.74	0.74	U
74-83-9	Bromomethane	70	14	14	3.5	3.5	U
75-00-3	Chloroethane	70	18	18	6.9	6.9	U
75-69-4	Trichlorofluoromethane (CFC 11)	70	19	19	3.5	3.5	U
75-35-4	1,1-Dichloroethene	70	14	14	3.5	3.5	U
75-09-2	Methylene Chloride	70	12	12	3.4	3.4	U
156-60-5	trans-1,2-Dichloroethene	70	14	14	3.5	3.5	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	70	14	14	3.5	3.5	U
156-59-2	cis-1,2-Dichloroethene	70	14	14	3.5	3.5	U
67-66-3	Chloroform	70	17	17	3.5	3.5	U
107-06-2	1,2-Dichloroethane	70	14	14	3.5	3.5	U
71-55-6	1,1,1-Trichloroethane (TCA)	70	19	19	3.5	3.5	U
56-23-5	Carbon Tetrachloride	70	2.2	2.2	0.35	0.35	U
78-87-5	1,2-Dichloropropane	70	16	16	3.5	3.5	U
75-27-4	Bromodichloromethane	70	4.7	4.7	0.70	0.70	U
79-01-6	Trichloroethene (TCE)	70	42	1.9	7.7	0.35	U
10061-01-5	cis-1,3-Dichloropropene	70	31	31	6.9	6.9	U
10061-02-6	trans-1,3-Dichloropropene	70	16	16	3.5	3.5	U
79-00-5	1,1,2-Trichloroethane	70	19	19	3.5	3.5	U
124-48-1	Dibromochloromethane	70	6.0	6.0	0.70	0.70	U
127-18-4	Tetrachloroethene (PCE)	70	410	2.5	61	0.37	U
108-90-7	Chlorobenzene	70	16	16	3.5	3.5	U
100-41-4	Ethylbenzene	70	30	30	6.9	6.9	U
179601-23-1	m,p-Xylenes	70	60	60	14	14	U
75-25-2	Bromoform	70	36	36	3.5	3.5	U
95-47-6	o-Xylene	70	30	30	6.9	6.9	U
79-34-5	1,1,2,2-Tetrachloroethane	70	4.7	4.7	0.69	0.69	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	91	70-130	10/17/11 2029	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** VP-5  
**Lab Code:** R1105621-002

**Service Request:** R1105621  
**Date Collected:** 10/ 6/11 1401  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/14/11 1536  
**Canister Dilution Factor:** 2.16

Initial Pressure (psig): -1.3                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	0.400	2400	2400	1200	1200	U
75-01-4	Vinyl Chloride	0.400	320	320	130	130	U
74-83-9	Bromomethane	0.400	2300	2300	600	600	U
75-00-3	Chloroethane	0.400	3100	3100	1200	1200	U
75-69-4	Trichlorofluoromethane (CFC 11)	0.400	3300	3300	600	600	U
75-35-4	1,1-Dichloroethene	0.400	2400	2400	600	600	U
75-09-2	Methylene Chloride	0.400	2100	2100	590	590	U
156-60-5	trans-1,2-Dichloroethene	0.400	2400	2400	600	600	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	0.400	2400	2400	600	600	U
156-59-2	cis-1,2-Dichloroethene	0.400	2400	2400	600	600	U
67-66-3	Chloroform	0.400	2900	2900	600	600	U
107-06-2	1,2-Dichloroethane	0.400	2400	2400	600	600	U
71-55-6	1,1,1-Trichloroethane (TCA)	0.400	3200	3200	590	590	U
56-23-5	Carbon Tetrachloride	0.400	380	380	60	60	U
78-87-5	1,2-Dichloropropane	0.400	2800	2800	600	600	U
75-27-4	Bromodichloromethane	0.400	810	810	120	120	U
79-01-6	Trichloroethene (TCE)	0.400	320	320	60	60	U
10061-01-5	cis-1,3-Dichloropropene	0.400	5400	5400	1200	1200	U
10061-02-6	trans-1,3-Dichloropropene	0.400	2700	2700	590	590	U
79-00-5	1,1,2-Trichloroethane	0.400	3200	3200	590	590	U
124-48-1	Dibromochloromethane	0.400	1000	1000	120	120	U
127-18-4	Tetrachloroethene (PCE)	0.400	430	430	64	64	U
108-90-7	Chlorobenzene	0.400	2800	2800	600	600	U
100-41-4	Ethylbenzene	0.400	120000	5100	28000	1200	
179601-23-1	m,p-Xylenes	0.400	470000	10000	110000	2400	
75-25-2	Bromoform	0.400	6200	6200	600	600	U
95-47-6	o-Xylene	0.400	47000	5100	11000	1200	
79-34-5	1,1,2,2-Tetrachloroethane	0.400	810	810	120	120	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	102	70-130	10/14/11 1536	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** VP-6  
**Lab Code:** R1105621-003

**Service Request:** R1105621  
**Date Collected:** 10/ 6/11 1402  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/14/11 1448  
**Canister Dilution Factor:** 2.16

Initial Pressure (psig): -1.3                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	0.150	6500	6500	3100	3100	U
75-01-4	Vinyl Chloride	0.150	860	860	340	340	U
74-83-9	Bromomethane	0.150	6200	6200	1600	1600	U
75-00-3	Chloroethane	0.150	8400	8400	3200	3200	U
75-69-4	Trichlorofluoromethane (CFC 11)	0.150	8900	8900	1600	1600	U
75-35-4	1,1-Dichloroethene	0.150	6300	6300	1600	1600	U
75-09-2	Methylene Chloride	0.150	5500	5500	1600	1600	U
156-60-5	trans-1,2-Dichloroethene	0.150	6300	6300	1600	1600	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	0.150	6500	6500	1600	1600	U
156-59-2	cis-1,2-Dichloroethene	0.150	6300	6300	1600	1600	U
67-66-3	Chloroform	0.150	7800	7800	1600	1600	U
107-06-2	1,2-Dichloroethane	0.150	6500	6500	1600	1600	U
71-55-6	1,1,1-Trichloroethane (TCA)	0.150	8600	8600	1600	1600	U
56-23-5	Carbon Tetrachloride	0.150	1000	1000	160	160	U
78-87-5	1,2-Dichloropropane	0.150	7300	7300	1600	1600	U
75-27-4	Bromodichloromethane	0.150	2200	2200	320	320	U
79-01-6	Trichloroethene (TCE)	0.150	860	860	160	160	U
10061-01-5	cis-1,3-Dichloropropene	0.150	14000	14000	3200	3200	U
10061-02-6	trans-1,3-Dichloropropene	0.150	7200	7200	1600	1600	U
79-00-5	1,1,2-Trichloroethane	0.150	8600	8600	1600	1600	U
124-48-1	Dibromochloromethane	0.150	2700	2700	320	320	U
127-18-4	Tetrachloroethene (PCE)	0.150	1200	1200	170	170	U
108-90-7	Chlorobenzene	0.150	7300	7300	1600	1600	U
100-41-4	Ethylbenzene	0.150	200000	14000	45000	3200	
179601-23-1	m,p-Xylenes	0.150	700000	28000	160000	6300	
75-25-2	Bromoform	0.150	16000	16000	1600	1600	U
95-47-6	o-Xylene	0.150	62000	14000	14000	3200	
79-34-5	1,1,2,2-Tetrachloroethane	0.150	2200	2200	310	310	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	100	70-130	10/14/11 1448	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 3-3  
**Lab Code:** R1105621-004

**Service Request:** R1105621  
**Date Collected:** 10/ 6/11 1542  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/17/11 1350  
**Canister Dilution Factor:** 2.10

Initial Pressure (psig): -0.9                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	800	1.2	1.2	0.57	0.57	U
75-01-4	Vinyl Chloride	800	0.16	0.16	0.062	0.062	U
74-83-9	Bromomethane	800	1.1	1.1	0.29	0.29	U
75-00-3	Chloroethane	800	1.5	1.5	0.58	0.58	U
75-69-4	Trichlorofluoromethane (CFC 11)	800	1.6	1.6	0.29	0.29	U
75-35-4	1,1-Dichloroethene	800	1.2	1.2	0.29	0.29	U
75-09-2	Methylene Chloride	800	1.0	1.0	0.29	0.29	U
156-60-5	trans-1,2-Dichloroethene	800	1.2	1.2	0.29	0.29	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	800	1.2	1.2	0.29	0.29	U
156-59-2	cis-1,2-Dichloroethene	800	1.2	1.2	0.29	0.29	U
67-66-3	Chloroform	800	1.4	1.4	0.29	0.29	U
107-06-2	1,2-Dichloroethane	800	1.2	1.2	0.29	0.29	U
71-55-6	1,1,1-Trichloroethane (TCA)	800	1.6	1.6	0.29	0.29	U
56-23-5	<b>Carbon Tetrachloride</b>	800	<b>0.55</b>	0.18	<b>0.088</b>	0.029	
78-87-5	1,2-Dichloropropane	800	1.3	1.3	0.29	0.29	U
75-27-4	Bromodichloromethane	800	0.39	0.39	0.059	0.059	U
79-01-6	<b>Trichloroethene (TCE)</b>	800	<b>0.70</b>	0.16	<b>0.13</b>	0.029	
10061-01-5	cis-1,3-Dichloropropene	800	2.6	2.6	0.58	0.58	U
10061-02-6	trans-1,3-Dichloropropene	800	1.3	1.3	0.29	0.29	U
79-00-5	1,1,2-Trichloroethane	800	1.6	1.6	0.29	0.29	U
124-48-1	Dibromochloromethane	800	0.50	0.50	0.059	0.059	U
127-18-4	<b>Tetrachloroethene (PCE)</b>	800	<b>0.83</b>	0.21	<b>0.12</b>	0.031	
108-90-7	Chlorobenzene	800	1.3	1.3	0.29	0.29	U
100-41-4	Ethylbenzene	800	2.5	2.5	0.57	0.57	U
179601-23-1	m,p-Xylenes	800	5.0	5.0	1.2	1.2	U
75-25-2	Bromoform	800	3.0	3.0	0.29	0.29	U
95-47-6	o-Xylene	800	2.5	2.5	0.57	0.57	U
79-34-5	1,1,2,2-Tetrachloroethane	800	0.39	0.39	0.057	0.057	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	107	70-130	10/17/11 1350	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 3-2  
**Lab Code:** R1105621-005

**Service Request:** R1105621  
**Date Collected:** 10/ 6/11 1540  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/17/11 1446  
**Canister Dilution Factor:** 2.19

Initial Pressure (psig): -1.5                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	900	1.1	1.1	0.53	0.53	U
75-01-4	Vinyl Chloride	900	0.15	0.15	0.057	0.057	U
74-83-9	Bromomethane	900	1.0	1.0	0.27	0.27	U
75-00-3	Chloroethane	900	1.4	1.4	0.54	0.54	U
75-69-4	<b>Trichlorofluoromethane (CFC 11)</b>	900	1.7	1.5	0.30	0.27	
75-35-4	1,1-Dichloroethene	900	1.1	1.1	0.27	0.27	U
75-09-2	Methylene Chloride	900	0.92	0.92	0.27	0.27	U
156-60-5	trans-1,2-Dichloroethene	900	1.1	1.1	0.27	0.27	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	900	1.1	1.1	0.27	0.27	U
156-59-2	cis-1,2-Dichloroethene	900	1.1	1.1	0.27	0.27	U
67-66-3	Chloroform	900	1.3	1.3	0.27	0.27	U
107-06-2	1,2-Dichloroethane	900	1.1	1.1	0.27	0.27	U
71-55-6	1,1,1-Trichloroethane (TCA)	900	1.5	1.5	0.27	0.27	U
56-23-5	<b>Carbon Tetrachloride</b>	900	0.62	0.17	0.099	0.027	
78-87-5	1,2-Dichloropropane	900	1.2	1.2	0.27	0.27	U
75-27-4	Bromodichloromethane	900	0.37	0.37	0.055	0.055	U
79-01-6	<b>Trichloroethene (TCE)</b>	900	1.3	0.15	0.24	0.027	
10061-01-5	cis-1,3-Dichloropropene	900	2.4	2.4	0.54	0.54	U
10061-02-6	trans-1,3-Dichloropropene	900	1.2	1.2	0.27	0.27	U
79-00-5	1,1,2-Trichloroethane	900	1.5	1.5	0.27	0.27	U
124-48-1	Dibromochloromethane	900	0.46	0.46	0.054	0.054	U
127-18-4	<b>Tetrachloroethene (PCE)</b>	900	1.0	0.19	0.15	0.029	
108-90-7	Chlorobenzene	900	1.2	1.2	0.27	0.27	U
100-41-4	Ethylbenzene	900	2.3	2.3	0.53	0.53	U
179601-23-1	m,p-Xylenes	900	4.6	4.6	1.1	1.1	U
75-25-2	Bromoform	900	2.8	2.8	0.27	0.27	U
95-47-6	o-Xylene	900	2.3	2.3	0.53	0.53	U
79-34-5	1,1,2,2-Tetrachloroethane	900	0.37	0.37	0.053	0.053	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	102	70-130	10/17/11 1446	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 2-6  
**Lab Code:** R1105621-006

**Service Request:** R1105621  
**Date Collected:** 10/ 6/11 1541  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/17/11 1538  
**Canister Dilution Factor:** 2.14

Initial Pressure (psig): -1.2                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	900	1.1	1.1	0.55	0.52	
75-01-4	Vinyl Chloride	900	0.14	0.14	0.056	0.056	U
74-83-9	Bromomethane	900	1.0	1.0	0.26	0.26	U
75-00-3	Chloroethane	900	1.4	1.4	0.52	0.52	U
75-69-4	Trichlorofluoromethane (CFC 11)	900	1.7	1.5	0.30	0.26	
75-35-4	1,1-Dichloroethene	900	1.0	1.0	0.26	0.26	U
75-09-2	Methylene Chloride	900	0.90	0.90	0.26	0.26	U
156-60-5	trans-1,2-Dichloroethene	900	1.0	1.0	0.26	0.26	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	900	1.1	1.1	0.26	0.26	U
156-59-2	cis-1,2-Dichloroethene	900	1.0	1.0	0.26	0.26	U
67-66-3	Chloroform	900	1.3	1.3	0.26	0.26	U
107-06-2	1,2-Dichloroethane	900	1.1	1.1	0.26	0.26	U
71-55-6	1,1,1-Trichloroethane (TCA)	900	1.4	1.4	0.26	0.26	U
56-23-5	Carbon Tetrachloride	900	0.59	0.17	0.094	0.026	
78-87-5	1,2-Dichloropropane	900	1.2	1.2	0.26	0.26	U
75-27-4	Bromodichloromethane	900	0.36	0.36	0.053	0.053	U
79-01-6	Trichloroethene (TCE)	900	1.5	0.14	0.28	0.027	
10061-01-5	cis-1,3-Dichloropropene	900	2.4	2.4	0.52	0.52	U
10061-02-6	trans-1,3-Dichloropropene	900	1.2	1.2	0.26	0.26	U
79-00-5	1,1,2-Trichloroethane	900	1.4	1.4	0.26	0.26	U
124-48-1	Dibromochloromethane	900	0.45	0.45	0.053	0.053	U
127-18-4	Tetrachloroethene (PCE)	900	3.1	0.19	0.45	0.028	
108-90-7	Chlorobenzene	900	1.2	1.2	0.26	0.26	U
100-41-4	Ethylbenzene	900	2.3	2.3	0.52	0.52	U
179601-23-1	m,p-Xylenes	900	4.5	4.5	1.0	1.0	U
75-25-2	Bromoform	900	2.7	2.7	0.26	0.26	U
95-47-6	o-Xylene	900	2.3	2.3	0.52	0.52	U
79-34-5	1,1,2,2-Tetrachloroethane	900	0.36	0.36	0.052	0.052	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	113	70-130	10/17/11 1538	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 6-SV1  
**Lab Code:** R1105621-007

**Service Request:** R1105621  
**Date Collected:** 10/ 6/11 1408  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/14/11 1624  
**Canister Dilution Factor:** 2.20

Initial Pressure (psig): -1.5                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	4.8	210	210	100	100	U
75-01-4	Vinyl Chloride	4.8	28	28	11	11	U
74-83-9	Bromomethane	4.8	200	200	51	51	U
75-00-3	Chloroethane	4.8	270	270	100	100	U
75-69-4	Trichlorofluoromethane (CFC 11)	4.8	280	280	51	51	U
75-35-4	1,1-Dichloroethene	4.8	200	200	51	51	U
75-09-2	Methylene Chloride	4.8	170	170	50	50	U
156-60-5	trans-1,2-Dichloroethene	4.8	200	200	51	51	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.8	210	210	51	51	U
156-59-2	cis-1,2-Dichloroethene	4.8	200	200	51	51	U
67-66-3	Chloroform	4.8	250	250	51	51	U
107-06-2	1,2-Dichloroethane	4.8	210	210	51	51	U
71-55-6	1,1,1-Trichloroethane (TCA)	4.8	280	280	50	50	U
56-23-5	Carbon Tetrachloride	4.8	32	32	5.1	5.1	U
78-87-5	1,2-Dichloropropane	4.8	230	230	51	51	U
75-27-4	Bromodichloromethane	4.8	69	69	10	10	U
79-01-6	Trichloroethene (TCE)	4.8	14000	28	2700	5.1	
10061-01-5	cis-1,3-Dichloropropene	4.8	460	460	100	100	U
10061-02-6	trans-1,3-Dichloropropene	4.8	230	230	50	50	U
79-00-5	1,1,2-Trichloroethane	4.8	280	280	50	50	U
124-48-1	Dibromochloromethane	4.8	87	87	10	10	U
127-18-4	Tetrachloroethene (PCE)	4.8	32000	37	4700	5.4	
108-90-7	Chlorobenzene	4.8	230	230	51	51	U
100-41-4	Ethylbenzene	4.8	440	440	100	100	U
179601-23-1	m,p-Xylenes	4.8	880	880	200	200	U
75-25-2	Bromoform	4.8	520	520	51	51	U
95-47-6	o-Xylene	4.8	440	440	100	100	U
79-34-5	1,1,2,2-Tetrachloroethane	4.8	69	69	10	10	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	93	70-130	10/14/11 1624	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BDLG 6-SV2  
**Lab Code:** R1105621-008

**Service Request:** R1105621  
**Date Collected:** 10/ 6/11 1415  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/14/11 1712  
**Canister Dilution Factor:** 2.14

Initial Pressure (psig): -1.1                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	2.3	420	420	200	200	U
75-01-4	Vinyl Chloride	2.3	56	56	22	22	U
74-83-9	Bromomethane	2.3	400	400	100	100	U
75-00-3	Chloroethane	2.3	540	540	200	200	U
75-69-4	Trichlorofluoromethane (CFC 11)	2.3	580	580	100	100	U
75-35-4	1,1-Dichloroethene	2.3	410	410	100	100	U
75-09-2	Methylene Chloride	2.3	350	350	100	100	U
156-60-5	trans-1,2-Dichloroethene	2.3	410	410	100	100	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.3	420	420	100	100	U
156-59-2	cis-1,2-Dichloroethene	2.3	410	410	100	100	U
67-66-3	Chloroform	2.3	500	500	100	100	U
107-06-2	1,2-Dichloroethane	2.3	420	420	100	100	U
71-55-6	1,1,1-Trichloroethane (TCA)	2.3	560	560	100	100	U
56-23-5	Carbon Tetrachloride	2.3	65	65	10	10	U
78-87-5	1,2-Dichloropropane	2.3	470	470	100	100	U
75-27-4	Bromodichloromethane	2.3	140	140	21	21	U
79-01-6	Trichloroethene (TCE)	2.3	10000	56	1900	10	U
10061-01-5	cis-1,3-Dichloropropene	2.3	930	930	210	210	U
10061-02-6	trans-1,3-Dichloropropene	2.3	470	470	100	100	U
79-00-5	1,1,2-Trichloroethane	2.3	560	560	100	100	U
124-48-1	Dibromochloromethane	2.3	180	180	21	21	U
127-18-4	Tetrachloroethene (PCE)	2.3	64000	74	9500	11	U
108-90-7	Chlorobenzene	2.3	470	470	100	100	U
100-41-4	Ethylbenzene	2.3	880	880	200	200	U
179601-23-1	m,p-Xylenes	2.3	1800	1800	410	410	U
75-25-2	Bromoform	2.3	1100	1100	100	100	U
95-47-6	o-Xylene	2.3	880	880	200	200	U
79-34-5	1,1,2,2-Tetrachloroethane	2.3	140	140	20	20	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	70-130	10/14/11 1712	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 6-SV3  
**Lab Code:** R1105621-009

**Service Request:** R1105621  
**Date Collected:** 10/ 6/11 1413  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/17/11 1026  
**Canister Dilution Factor:** 2.19

Initial Pressure (psig): -1.5                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	7.6	130	130	63	63	U
75-01-4	Vinyl Chloride	7.6	17	17	6.8	6.8	U
74-83-9	Bromomethane	7.6	120	120	32	32	U
75-00-3	Chloroethane	7.6	170	170	63	63	U
75-69-4	Trichlorofluoromethane (CFC 11)	7.6	180	180	32	32	U
75-35-4	1,1-Dichloroethene	7.6	130	130	32	32	U
75-09-2	Methylene Chloride	7.6	110	110	32	32	U
156-60-5	trans-1,2-Dichloroethene	7.6	130	130	32	32	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	7.6	130	130	32	32	U
156-59-2	cis-1,2-Dichloroethene	7.6	130	130	32	32	U
67-66-3	Chloroform	7.6	160	160	32	32	U
107-06-2	1,2-Dichloroethane	7.6	130	130	32	32	U
71-55-6	1,1,1-Trichloroethane (TCA)	7.6	170	170	32	32	U
56-23-5	Carbon Tetrachloride	7.6	20	20	3.2	3.2	U
78-87-5	1,2-Dichloropropane	7.6	150	150	32	32	U
75-27-4	Bromodichloromethane	7.6	43	43	6.5	6.5	U
79-01-6	Trichloroethene (TCE)	7.6	8800	17	1600	3.2	U
10061-01-5	cis-1,3-Dichloropropene	7.6	290	290	63	63	U
10061-02-6	trans-1,3-Dichloropropene	7.6	140	140	32	32	U
79-00-5	1,1,2-Trichloroethane	7.6	170	170	32	32	U
124-48-1	Dibromochloromethane	7.6	55	55	6.4	6.4	U
127-18-4	Tetrachloroethene (PCE)	7.6	20000	23	2900	3.4	U
108-90-7	Chlorobenzene	7.6	150	150	32	32	U
100-41-4	Ethylbenzene	7.6	270	270	63	63	U
179601-23-1	m,p-Xylenes	7.6	550	550	130	130	U
75-25-2	Bromoform	7.6	330	330	32	32	U
95-47-6	o-Xylene	7.6	270	270	63	63	U
79-34-5	1,1,2,2-Tetrachloroethane	7.6	43	43	6.3	6.3	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	91	70-130	10/17/11 1026	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 6-1  
**Lab Code:** R1105621-010

**Service Request:** R1105621  
**Date Collected:** 10/ 6/11 1520  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/14/11 2057  
**Canister Dilution Factor:** 2.32

Initial Pressure (psig): -2.2                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	400	2.6	2.6	1.3	1.3	U
75-01-4	Vinyl Chloride	400	0.35	0.35	0.14	0.14	U
74-83-9	Bromomethane	400	2.5	2.5	0.64	0.64	U
75-00-3	Chloroethane	400	3.4	3.4	1.3	1.3	U
75-69-4	Trichlorofluoromethane (CFC 11)	400	3.6	3.6	0.64	0.64	U
75-35-4	1,1-Dichloroethene	400	2.6	2.6	0.64	0.64	U
75-09-2	Methylene Chloride	400	2.2	2.2	0.63	0.63	U
156-60-5	trans-1,2-Dichloroethene	400	2.6	2.6	0.64	0.64	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	400	2.6	2.6	0.65	0.65	U
156-59-2	cis-1,2-Dichloroethene	400	2.6	2.6	0.64	0.64	U
67-66-3	Chloroform	400	3.1	3.1	0.64	0.64	U
107-06-2	1,2-Dichloroethane	400	2.6	2.6	0.65	0.65	U
71-55-6	1,1,1-Trichloroethane (TCA)	400	3.5	3.5	0.64	0.64	U
56-23-5	<b>Carbon Tetrachloride</b>	400	<b>0.65</b>	0.41	<b>0.10</b>	0.065	
78-87-5	1,2-Dichloropropane	400	3.0	3.0	0.64	0.64	U
75-27-4	Bromodichloromethane	400	0.87	0.87	0.13	0.13	U
79-01-6	<b>Trichloroethene (TCE)</b>	400	<b>1.1</b>	0.35	<b>0.20</b>	0.065	
10061-01-5	cis-1,3-Dichloropropene	400	5.8	5.8	1.3	1.3	U
10061-02-6	trans-1,3-Dichloropropene	400	2.9	2.9	0.64	0.64	U
79-00-5	1,1,2-Trichloroethane	400	3.5	3.5	0.64	0.64	U
124-48-1	Dibromochloromethane	400	1.1	1.1	0.13	0.13	U
127-18-4	<b>Tetrachloroethene (PCE)</b>	400	<b>2.0</b>	0.46	<b>0.29</b>	0.068	
108-90-7	Chlorobenzene	400	3.0	3.0	0.64	0.64	U
100-41-4	Ethylbenzene	400	5.5	5.5	1.3	1.3	U
179601-23-1	m,p-Xylenes	400	11	11	2.6	2.6	U
75-25-2	Bromoform	400	6.6	6.6	0.64	0.64	U
95-47-6	o-Xylene	400	5.5	5.5	1.3	1.3	U
79-34-5	1,1,2,2-Tetrachloroethane	400	0.87	0.87	0.13	0.13	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	98	70-130	10/14/11 2057	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 6-2  
**Lab Code:** R1105621-011

**Service Request:** R1105621  
**Date Collected:** 10/ 7/11 1544  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/17/11 1628  
**Canister Dilution Factor:** 2.11

Initial Pressure (psig): -0.9                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	800	1.2	1.2	0.57	0.57	U
75-01-4	Vinyl Chloride	800	0.16	0.16	0.062	0.062	U
74-83-9	Bromomethane	800	1.1	1.1	0.29	0.29	U
75-00-3	Chloroethane	800	1.5	1.5	0.58	0.58	U
75-69-4	Trichlorofluoromethane (CFC 11)	800	1.7	1.6	0.30	0.29	
75-35-4	1,1-Dichloroethene	800	1.2	1.2	0.29	0.29	U
75-09-2	Methylene Chloride	800	1.0	1.0	0.29	0.29	U
156-60-5	trans-1,2-Dichloroethene	800	1.2	1.2	0.29	0.29	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	800	1.2	1.2	0.29	0.29	U
156-59-2	cis-1,2-Dichloroethene	800	1.9	1.2	0.49	0.29	
67-66-3	Chloroform	800	1.4	1.4	0.29	0.29	U
107-06-2	1,2-Dichloroethane	800	1.2	1.2	0.29	0.29	U
71-55-6	1,1,1-Trichloroethane (TCA)	800	1.6	1.6	0.29	0.29	U
56-23-5	Carbon Tetrachloride	800	0.62	0.18	0.099	0.029	
78-87-5	1,2-Dichloropropane	800	1.3	1.3	0.29	0.29	U
75-27-4	Bromodichloromethane	800	0.40	0.40	0.059	0.059	U
79-01-6	Trichloroethene (TCE)	800	1.8	0.16	0.34	0.029	
10061-01-5	cis-1,3-Dichloropropene	800	2.6	2.6	0.58	0.58	U
10061-02-6	trans-1,3-Dichloropropene	800	1.3	1.3	0.29	0.29	U
79-00-5	1,1,2-Trichloroethane	800	1.6	1.6	0.29	0.29	U
124-48-1	Dibromochloromethane	800	0.50	0.50	0.059	0.059	U
127-18-4	Tetrachloroethene (PCE)	800	1.9	0.21	0.28	0.031	
108-90-7	Chlorobenzene	800	1.3	1.3	0.29	0.29	U
100-41-4	Ethylbenzene	800	2.5	2.5	0.58	0.58	U
179601-23-1	m,p-Xylenes	800	5.0	5.0	1.2	1.2	U
75-25-2	Bromoform	800	3.0	3.0	0.29	0.29	U
95-47-6	o-Xylene	800	2.5	2.5	0.58	0.58	U
79-34-5	1,1,2,2-Tetrachloroethane	800	0.40	0.40	0.058	0.058	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	10/17/11 1628	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 5-1  
**Lab Code:** R1105621-012

**Service Request:** R1105621  
**Date Collected:** 10/ 7/11 1242  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/14/11 2229  
**Canister Dilution Factor:** 2.20

Initial Pressure (psig): -1.5                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	200	5.0	5.0	2.4	2.4	U
75-01-4	Vinyl Chloride	200	0.66	0.66	0.26	0.26	U
74-83-9	Bromomethane	200	4.7	4.7	1.2	1.2	U
75-00-3	Chloroethane	200	6.4	6.4	2.4	2.4	U
75-69-4	Trichlorofluoromethane (CFC 11)	200	6.8	6.8	1.2	1.2	U
75-35-4	1,1-Dichloroethene	200	4.8	4.8	1.2	1.2	U
75-09-2	Methylene Chloride	200	4.2	4.2	1.2	1.2	U
156-60-5	trans-1,2-Dichloroethene	200	4.8	4.8	1.2	1.2	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	5.0	5.0	1.2	1.2	U
156-59-2	cis-1,2-Dichloroethene	200	4.8	4.8	1.2	1.2	U
67-66-3	Chloroform	200	5.9	5.9	1.2	1.2	U
107-06-2	1,2-Dichloroethane	200	5.0	5.0	1.2	1.2	U
71-55-6	1,1,1-Trichloroethane (TCA)	200	6.6	6.6	1.2	1.2	U
56-23-5	Carbon Tetrachloride	200	0.77	0.77	0.12	0.12	U
78-87-5	1,2-Dichloropropane	200	5.6	5.6	1.2	1.2	U
75-27-4	Bromodichloromethane	200	1.7	1.7	0.25	0.25	U
79-01-6	Trichloroethene (TCE)	200	5.1	0.66	0.95	0.12	U
10061-01-5	cis-1,3-Dichloropropene	200	11	11	2.4	2.4	U
10061-02-6	trans-1,3-Dichloropropene	200	5.5	5.5	1.2	1.2	U
79-00-5	1,1,2-Trichloroethane	200	6.6	6.6	1.2	1.2	U
124-48-1	Dibromochloromethane	200	2.1	2.1	0.25	0.25	U
127-18-4	Tetrachloroethene (PCE)	200	3.7	0.88	0.55	0.13	U
108-90-7	Chlorobenzene	200	5.6	5.6	1.2	1.2	U
100-41-4	Ethylbenzene	200	10	10	2.4	2.4	U
179601-23-1	m,p-Xylenes	200	21	21	4.8	4.8	U
75-25-2	Bromoform	200	13	13	1.2	1.2	U
95-47-6	o-Xylene	200	10	10	2.4	2.4	U
79-34-5	1,1,2,2-Tetrachloroethane	200	1.7	1.7	0.24	0.24	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	98	70-130	10/14/11 2229	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 5-2  
**Lab Code:** R1105621-013

**Service Request:** R1105621  
**Date Collected:** 10/ 7/11 1235  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/17/11 1719  
**Canister Dilution Factor:** 2.15

Initial Pressure (psig): -1.2                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	800	1.2	1.2	0.59	0.59	U
75-01-4	Vinyl Chloride	800	0.16	0.16	0.063	0.063	U
74-83-9	Bromomethane	800	1.2	1.2	0.30	0.30	U
75-00-3	Chloroethane	800	1.6	1.6	0.59	0.59	U
75-69-4	<b>Trichlorofluoromethane (CFC 11)</b>	800	<b>4.0</b>	1.7	<b>0.71</b>	0.30	
75-35-4	1,1-Dichloroethene	800	1.2	1.2	0.30	0.30	U
75-09-2	Methylene Chloride	800	1.0	1.0	0.29	0.29	U
156-60-5	trans-1,2-Dichloroethene	800	1.2	1.2	0.30	0.30	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	800	1.2	1.2	0.30	0.30	U
156-59-2	<b>cis-1,2-Dichloroethene</b>	800	<b>1.3</b>	1.2	<b>0.32</b>	0.30	
67-66-3	Chloroform	800	1.5	1.5	0.30	0.30	U
107-06-2	1,2-Dichloroethane	800	1.2	1.2	0.30	0.30	U
71-55-6	1,1,1-Trichloroethane (TCA)	800	1.6	1.6	0.30	0.30	U
56-23-5	<b>Carbon Tetrachloride</b>	800	<b>0.63</b>	0.19	<b>0.10</b>	0.030	
78-87-5	1,2-Dichloropropane	800	1.4	1.4	0.30	0.30	U
75-27-4	Bromodichloromethane	800	0.40	0.40	0.060	0.060	U
79-01-6	<b>Trichloroethene (TCE)</b>	800	<b>8.4</b>	0.16	<b>1.6</b>	0.030	
10061-01-5	cis-1,3-Dichloropropene	800	2.7	2.7	0.59	0.59	U
10061-02-6	trans-1,3-Dichloropropene	800	1.3	1.3	0.30	0.30	U
79-00-5	1,1,2-Trichloroethane	800	1.6	1.6	0.30	0.30	U
124-48-1	Dibromochloromethane	800	0.51	0.51	0.060	0.060	U
127-18-4	<b>Tetrachloroethene (PCE)</b>	800	<b>7.5</b>	0.22	<b>1.1</b>	0.032	
108-90-7	Chlorobenzene	800	1.4	1.4	0.30	0.30	U
100-41-4	Ethylbenzene	800	2.6	2.6	0.59	0.59	U
179601-23-1	<b>m,p-Xylenes</b>	800	<b>8.0</b>	5.1	<b>1.8</b>	1.2	
75-25-2	Bromoform	800	3.1	3.1	0.30	0.30	U
95-47-6	o-Xylene	800	2.6	2.6	0.59	0.59	U
79-34-5	1,1,2,2-Tetrachloroethane	800	0.40	0.40	0.059	0.059	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	10/17/11 1719	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 5-3  
**Lab Code:** R1105621-014

**Service Request:** R1105621  
**Date Collected:** 10/ 7/11 1240  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/17/11 1810  
**Canister Dilution Factor:** 2.17

Initial Pressure (psig): -1.3                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m <sup>3</sup>	MRL µg/m <sup>3</sup>	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	800	1.2	1.2	0.59	0.59	U
75-01-4	Vinyl Chloride	800	0.16	0.16	0.064	0.064	U
74-83-9	Bromomethane	800	1.2	1.2	0.30	0.30	U
75-00-3	Chloroethane	800	1.6	1.6	0.60	0.60	U
75-69-4	<b>Trichlorofluoromethane (CFC 11)</b>	800	<b>2.1</b>	1.7	<b>0.37</b>	0.30	
75-35-4	1,1-Dichloroethene	800	1.2	1.2	0.30	0.30	U
75-09-2	Methylene Chloride	800	1.0	1.0	0.30	0.30	U
156-60-5	trans-1,2-Dichloroethene	800	1.2	1.2	0.30	0.30	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	800	1.2	1.2	0.30	0.30	U
156-59-2	cis-1,2-Dichloroethene	800	1.2	1.2	0.30	0.30	U
67-66-3	Chloroform	800	1.5	1.5	0.30	0.30	U
107-06-2	1,2-Dichloroethane	800	1.2	1.2	0.30	0.30	U
71-55-6	1,1,1-Trichloroethane (TCA)	800	1.6	1.6	0.30	0.30	U
56-23-5	<b>Carbon Tetrachloride</b>	800	<b>0.58</b>	0.19	<b>0.092</b>	0.030	
78-87-5	1,2-Dichloropropane	800	1.4	1.4	0.30	0.30	U
75-27-4	Bromodichloromethane	800	0.41	0.41	0.061	0.061	U
79-01-6	<b>Trichloroethene (TCE)</b>	800	<b>17</b>	0.16	<b>3.1</b>	0.030	
10061-01-5	cis-1,3-Dichloropropene	800	2.7	2.7	0.60	0.60	U
10061-02-6	trans-1,3-Dichloropropene	800	1.4	1.4	0.30	0.30	U
79-00-5	1,1,2-Trichloroethane	800	1.6	1.6	0.30	0.30	U
124-48-1	Dibromochloromethane	800	0.52	0.52	0.061	0.061	U
127-18-4	<b>Tetrachloroethene (PCE)</b>	800	<b>3.1</b>	0.22	<b>0.45</b>	0.032	
108-90-7	Chlorobenzene	800	1.4	1.4	0.30	0.30	U
100-41-4	Ethylbenzene	800	2.6	2.6	0.59	0.59	U
179601-23-1	m,p-Xylenes	800	5.2	5.2	1.2	1.2	U
75-25-2	Bromoform	800	3.1	3.1	0.30	0.30	U
95-47-6	o-Xylene	800	2.6	2.6	0.59	0.59	U
79-34-5	1,1,2,2-Tetrachloroethane	800	0.41	0.41	0.059	0.059	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	10/17/11 1810	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 5-4  
**Lab Code:** R1105621-015

**Service Request:** R1105621  
**Date Collected:** 10/7/11 1230  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/17/11 1901  
**Canister Dilution Factor:** 2.35

Initial Pressure (psig): -2.4                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	800	1.3	1.3	0.64	0.64	U
75-01-4	Vinyl Chloride	800	0.18	0.18	0.069	0.069	U
74-83-9	Bromomethane	800	1.3	1.3	0.33	0.33	U
75-00-3	Chloroethane	800	1.7	1.7	0.65	0.65	U
75-69-4	Trichlorofluoromethane (CFC 11)	800	1.8	1.8	0.32	0.32	U
75-35-4	1,1-Dichloroethene	800	1.3	1.3	0.33	0.33	U
75-09-2	Methylene Chloride	800	1.1	1.1	0.32	0.32	U
156-60-5	trans-1,2-Dichloroethene	800	1.3	1.3	0.33	0.33	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	800	1.3	1.3	0.33	0.33	U
156-59-2	cis-1,2-Dichloroethene	800	1.3	1.3	0.33	0.33	U
67-66-3	Chloroform	800	1.6	1.6	0.32	0.32	U
107-06-2	1,2-Dichloroethane	800	1.3	1.3	0.33	0.33	U
71-55-6	1,1,1-Trichloroethane (TCA)	800	1.8	1.8	0.32	0.32	U
56-23-5	<b>Carbon Tetrachloride</b>	800	<b>0.63</b>	0.21	<b>0.10</b>	0.033	
78-87-5	1,2-Dichloropropane	800	1.5	1.5	0.32	0.32	U
75-27-4	Bromodichloromethane	800	0.44	0.44	0.066	0.066	U
79-01-6	<b>Trichloroethene (TCE)</b>	800	<b>2.1</b>	0.18	<b>0.39</b>	0.033	
10061-01-5	cis-1,3-Dichloropropene	800	2.9	2.9	0.65	0.65	U
10061-02-6	trans-1,3-Dichloropropene	800	1.5	1.5	0.32	0.32	U
79-00-5	1,1,2-Trichloroethane	800	1.8	1.8	0.32	0.32	U
124-48-1	Dibromochloromethane	800	0.56	0.56	0.066	0.066	U
127-18-4	<b>Tetrachloroethene (PCE)</b>	800	<b>1.0</b>	0.24	<b>0.15</b>	0.035	
108-90-7	Chlorobenzene	800	1.5	1.5	0.33	0.33	U
100-41-4	Ethylbenzene	800	2.8	2.8	0.64	0.64	U
179601-23-1	m,p-Xylenes	800	5.6	5.6	1.3	1.3	U
75-25-2	Bromoform	800	3.3	3.3	0.32	0.32	U
95-47-6	o-Xylene	800	2.8	2.8	0.64	0.64	U
79-34-5	1,1,2,2-Tetrachloroethane	800	0.44	0.44	0.064	0.064	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	104	70-130	10/17/11 1901	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 5-SV1  
**Lab Code:** R1105621-016

**Service Request:** R1105621  
**Date Collected:** 10/ 7/11 1105  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/17/11 1114  
**Canister Dilution Factor:** 2.06

Initial Pressure (psig): -0.6                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	18.8	49	49	24	24	U
75-01-4	Vinyl Chloride	18.8	6.6	6.6	2.6	2.6	U
74-83-9	Bromomethane	18.8	47	47	12	12	U
75-00-3	Chloroethane	18.8	64	64	24	24	U
75-69-4	Trichlorofluoromethane (CFC 11)	18.8	68	68	12	12	U
75-35-4	1,1-Dichloroethene	18.8	48	48	12	12	U
75-09-2	Methylene Chloride	18.8	42	42	12	12	U
156-60-5	trans-1,2-Dichloroethene	18.8	48	48	12	12	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	18.8	49	49	12	12	U
<b>156-59-2</b>	<b>cis-1,2-Dichloroethene</b>	18.8	<b>130</b>	48	<b>33</b>	12	
67-66-3	Chloroform	18.8	59	59	12	12	U
107-06-2	1,2-Dichloroethane	18.8	49	49	12	12	U
71-55-6	1,1,1-Trichloroethane (TCA)	18.8	66	66	12	12	U
56-23-5	Carbon Tetrachloride	18.8	7.7	7.7	1.2	1.2	U
78-87-5	1,2-Dichloropropane	18.8	56	56	12	12	U
75-27-4	Bromodichloromethane	18.8	16	16	2.5	2.5	U
<b>79-01-6</b>	<b>Trichloroethene (TCE)</b>	18.8	<b>5100</b>	6.6	<b>960</b>	1.2	
10061-01-5	cis-1,3-Dichloropropene	18.8	110	110	24	24	U
10061-02-6	trans-1,3-Dichloropropene	18.8	55	55	12	12	U
79-00-5	1,1,2-Trichloroethane	18.8	66	66	12	12	U
124-48-1	Dibromochloromethane	18.8	21	21	2.4	2.4	U
<b>127-18-4</b>	<b>Tetrachloroethene (PCE)</b>	18.8	<b>790</b>	8.8	<b>120</b>	1.3	
108-90-7	Chlorobenzene	18.8	56	56	12	12	U
100-41-4	Ethylbenzene	18.8	100	100	24	24	U
179601-23-1	m,p-Xylenes	18.8	210	210	48	48	U
75-25-2	Bromoform	18.8	120	120	12	12	U
95-47-6	o-Xylene	18.8	100	100	24	24	U
79-34-5	1,1,2,2-Tetrachloroethane	18.8	16	16	2.4	2.4	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	93	70-130	10/17/11 1114	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 5-SV2  
**Lab Code:** R1105621-017

**Service Request:** R1105621  
**Date Collected:** 10/7/11 1111  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/15/11 0136  
**Canister Dilution Factor:** 2.14

Initial Pressure (psig): -1.2                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	370	2.6	2.6	1.3	1.3	U
75-01-4	<b>Vinyl Chloride</b>	370	1.2	0.35	0.45	0.14	
74-83-9	Bromomethane	370	2.5	2.5	0.64	0.64	U
75-00-3	Chloroethane	370	3.4	3.4	1.3	1.3	U
75-69-4	Trichlorofluoromethane (CFC 11)	370	3.6	3.6	0.64	0.64	U
75-35-4	1,1-Dichloroethene	370	2.5	2.5	0.64	0.64	U
75-09-2	Methylene Chloride	370	2.2	2.2	0.63	0.63	U
156-60-5	trans-1,2-Dichloroethene	370	2.5	2.5	0.64	0.64	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	370	2.6	2.6	0.64	0.64	U
156-59-2	<b>cis-1,2-Dichloroethene</b>	370	5.1	2.5	1.3	0.64	
67-66-3	Chloroform	370	3.1	3.1	0.64	0.64	U
107-06-2	1,2-Dichloroethane	370	2.6	2.6	0.64	0.64	U
71-55-6	1,1,1-Trichloroethane (TCA)	370	3.5	3.5	0.64	0.64	U
56-23-5	<b>Carbon Tetrachloride</b>	370	0.64	0.40	0.10	0.064	
78-87-5	1,2-Dichloropropane	370	2.9	2.9	0.64	0.64	U
75-27-4	Bromodichloromethane	370	0.87	0.87	0.13	0.13	U
79-01-6	<b>Trichloroethene (TCE)</b>	370	470	0.35	88	0.065	E
10061-01-5	cis-1,3-Dichloropropene	370	5.8	5.8	1.3	1.3	U
10061-02-6	trans-1,3-Dichloropropene	370	2.9	2.9	0.64	0.64	U
79-00-5	1,1,2-Trichloroethane	370	3.5	3.5	0.64	0.64	U
124-48-1	Dibromochloromethane	370	1.1	1.1	0.13	0.13	U
127-18-4	<b>Tetrachloroethene (PCE)</b>	370	25	0.46	3.8	0.068	
108-90-7	Chlorobenzene	370	2.9	2.9	0.64	0.64	U
100-41-4	<b>Ethylbenzene</b>	370	8.1	5.5	1.9	1.3	
179601-23-1	<b>m,p-Xylenes</b>	370	28	11	6.4	2.5	
75-25-2	Bromoform	370	6.6	6.6	0.64	0.64	U
95-47-6	<b>o-Xylene</b>	370	11	5.5	2.5	1.3	
79-34-5	1,1,2,2-Tetrachloroethane	370	0.87	0.87	0.13	0.13	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	10/15/11 0136	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 5-SV2  
**Lab Code:** R1105621-017  
**Run Type:** Dilution

**Service Request:** R1105621  
**Date Collected:** 10/ 7/11 1111  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/17/11 1945  
**Canister Dilution Factor:** 2.14

Initial Pressure (psig): -1.2                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result $\mu\text{g}/\text{m}^3$	MRL $\mu\text{g}/\text{m}^3$	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	175	5.5	5.5	2.7	2.7	U
75-01-4	<b>Vinyl Chloride</b>	175	1.2	0.73	0.46	0.29	D
74-83-9	Bromomethane	175	5.3	5.3	1.4	1.4	U
75-00-3	Chloroethane	175	7.1	7.1	2.7	2.7	U
75-69-4	Trichlorofluoromethane (CFC 11)	175	7.6	7.6	1.3	1.3	U
75-35-4	1,1-Dichloroethene	175	5.4	5.4	1.4	1.4	U
75-09-2	Methylene Chloride	175	4.6	4.6	1.3	1.3	U
156-60-5	trans-1,2-Dichloroethene	175	5.4	5.4	1.4	1.4	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	175	5.5	5.5	1.4	1.4	U
156-59-2	cis-1,2-Dichloroethene	175	5.4	5.4	1.4	1.4	U
67-66-3	Chloroform	175	6.6	6.6	1.4	1.4	U
107-06-2	1,2-Dichloroethane	175	5.5	5.5	1.4	1.4	U
71-55-6	1,1,1-Trichloroethane (TCA)	175	7.3	7.3	1.3	1.3	U
56-23-5	Carbon Tetrachloride	175	0.86	0.86	0.14	0.14	U
78-87-5	1,2-Dichloropropane	175	6.2	6.2	1.3	1.3	U
75-27-4	Bromodichloromethane	175	1.8	1.8	0.27	0.27	U
79-01-6	<b>Trichloroethene (TCE)</b>	175	410	0.73	77	0.14	D
10061-01-5	cis-1,3-Dichloropropene	175	12	12	2.7	2.7	U
10061-02-6	trans-1,3-Dichloropropene	175	6.1	6.1	1.3	1.3	U
79-00-5	1,1,2-Trichloroethane	175	7.3	7.3	1.3	1.3	U
124-48-1	Dibromochloromethane	175	2.3	2.3	0.27	0.27	U
127-18-4	<b>Tetrachloroethene (PCE)</b>	175	23	0.98	3.4	0.14	D
108-90-7	Chlorobenzene	175	6.2	6.2	1.4	1.4	U
100-41-4	Ethylbenzene	175	12	12	2.7	2.7	U
179601-23-1	<b>m,p-Xylenes</b>	175	25	23	5.7	5.4	D
75-25-2	Bromoform	175	14	14	1.3	1.3	U
95-47-6	o-Xylene	175	12	12	2.7	2.7	U
79-34-5	1,1,2,2-Tetrachloroethane	175	1.8	1.8	0.27	0.27	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	70-130	10/17/11 1945	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** BLDG 5-SV3  
**Lab Code:** R1105621-018

**Service Request:** R1105621  
**Date Collected:** 10/7/11 1117  
**Date Received:** 10/10/11

**Analytical Method:** TO-15

**Date Analyzed:** 10/17/11 1259  
**Canister Dilution Factor:** 2.14

Initial Pressure (psig): -1.1                      Final Pressure (psig): 14.3

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	5.8	170	170	80	80	U
75-01-4	Vinyl Chloride	5.8	22	22	8.7	8.7	U
74-83-9	Bromomethane	5.8	160	160	41	41	U
75-00-3	Chloroethane	5.8	210	210	81	81	U
75-69-4	Trichlorofluoromethane (CFC 11)	5.8	230	230	41	41	U
75-35-4	1,1-Dichloroethene	5.8	160	160	41	41	U
75-09-2	Methylene Chloride	5.8	140	140	40	40	U
156-60-5	trans-1,2-Dichloroethene	5.8	160	160	41	41	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.8	170	170	41	41	U
156-59-2	cis-1,2-Dichloroethene	5.8	160	160	41	41	U
67-66-3	Chloroform	5.8	200	200	41	41	U
107-06-2	1,2-Dichloroethane	5.8	170	170	41	41	U
71-55-6	1,1,1-Trichloroethane (TCA)	5.8	220	220	41	41	U
56-23-5	Carbon Tetrachloride	5.8	26	26	4.1	4.1	U
78-87-5	1,2-Dichloropropane	5.8	190	190	41	41	U
75-27-4	Bromodichloromethane	5.8	55	55	8.3	8.3	U
79-01-6	Trichloroethene (TCE)	5.8	20000	22	3700	4.1	U
10061-01-5	cis-1,3-Dichloropropene	5.8	370	370	81	81	U
10061-02-6	trans-1,3-Dichloropropene	5.8	180	180	41	41	U
79-00-5	1,1,2-Trichloroethane	5.8	220	220	41	41	U
124-48-1	Dibromochloromethane	5.8	70	70	8.2	8.2	U
127-18-4	Tetrachloroethene (PCE)	5.8	1400	30	210	4.4	U
108-90-7	Chlorobenzene	5.8	190	190	41	41	U
100-41-4	Ethylbenzene	5.8	350	350	81	81	U
179601-23-1	m,p-Xylenes	5.8	700	700	160	160	U
75-25-2	Bromoform	5.8	420	420	41	41	U
95-47-6	o-Xylene	5.8	350	350	81	81	U
79-34-5	1,1,2,2-Tetrachloroethane	5.8	55	55	8.1	8.1	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	70-130	10/17/11 1259	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** Method Blank  
**Lab Code:** RQ1110532-01

**Service Request:** R1105621  
**Date Collected:** NA  
**Date Received:** NA

**Analytical Method:** TO-15

**Date Analyzed:** 10/14/11 1312

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	1000	0.45	0.45	0.22	0.22	U
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
75-00-3	Chloroethane	1000	0.58	0.58	0.22	0.22	U
75-69-4	Trichlorofluoromethane (CFC 11)	1000	0.62	0.62	0.11	0.11	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.45	0.45	0.11	0.11	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	97	70-130	10/14/11 1312	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air  
**Sample Name:** Method Blank  
**Lab Code:** RQ1110533-01

**Service Request:** R1105621  
**Date Collected:** NA  
**Date Received:** NA

**Analytical Method:** TO-15

**Date Analyzed:** 10/17/11 0938

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	1000	0.45	0.45	0.22	0.22	U
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
75-00-3	Chloroethane	1000	0.58	0.58	0.22	0.22	U
75-69-4	Trichlorofluoromethane (CFC 11)	1000	0.62	0.62	0.11	0.11	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.45	0.45	0.11	0.11	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	93	70-130	10/17/11 0938	

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air

**Service Request:** R1105621  
**Date Analyzed:** 10/14/11

**Lab Control Sample Summary**  
**Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS**

**Analytical Method:** TO-15

**Units:** µg/m<sup>3</sup>  
**Basis:** NA

**Analysis Lot:** 266092

Analyte Name	Lab Control Sample RQ1110532-02			Duplicate Lab Control Sample RQ1110532-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Chloromethane	5.24	5.21	101	5.41	5.21	104	70 - 130	3	25
Vinyl Chloride	6.27	6.45	97	6.36	6.45	99	70 - 130	1	25
Bromomethane	8.62	9.80	88	8.80	9.80	90	70 - 130	2	25
Chloroethane	5.99	6.59	91	6.13	6.59	93	70 - 130	2	25
Trichlorofluoromethane (CFC 11)	15.5	14.6	106	15.6	14.6	107	70 - 130	<1	25
1,1-Dichloroethene	10.6	10.2	104	10.8	10.2	106	70 - 130	2	25
Methylene Chloride	8.16	8.94	91	8.35	8.94	93	70 - 130	2	25
trans-1,2-Dichloroethene	10.5	10.3	102	10.6	10.3	103	70 - 130	2	25
1,1-Dichloroethane (1,1-DCA)	10.3	10.4	99	10.4	10.4	100	70 - 130	1	25
cis-1,2-Dichloroethene	9.59	10.4	92	9.72	10.4	93	70 - 130	1	25
Chloroform	13.1	12.8	103	13.3	12.8	104	70 - 130	1	25
1,2-Dichloroethane	12.6	10.6	119	12.5	10.6	118	70 - 130	<1	25
1,1,1-Trichloroethane (TCA)	15.2	14.0	109	15.1	14.0	107	70 - 130	1	25
Carbon Tetrachloride	17.6	16.0	110	17.3	16.0	108	70 - 130	2	25
1,2-Dichloropropane	12.1	12.1	100	12.0	12.1	99	70 - 130	<1	25
Bromodichloromethane	18.8	17.4	108	18.8	17.4	108	70 - 130	<1	25
Trichloroethene (TCE)	13.5	14.0	97	13.5	14.0	96	70 - 130	<1	25
cis-1,3-Dichloropropene	12.4	12.3	101	12.5	12.3	102	70 - 130	<1	25
trans-1,3-Dichloropropene	12.0	11.2	107	12.0	11.2	107	70 - 130	<1	25
1,1,2-Trichloroethane	14.1	14.5	97	14.1	14.5	97	70 - 130	<1	25
Dibromochloromethane	23.5	23.2	101	23.4	23.2	101	70 - 130	<1	25
Tetrachloroethene (PCE)	17.7	17.6	100	17.6	17.6	100	70 - 130	<1	25
Chlorobenzene	11.9	12.3	97	11.8	12.3	96	70 - 130	<1	25
Ethylbenzene	11.3	11.5	98	11.2	11.5	97	70 - 130	<1	25
m,p-Xylenes	22.1	22.8	97	22.0	22.8	97	70 - 130	<1	25
Bromoform	27.8	27.1	102	27.7	27.1	102	70 - 130	<1	25
o-Xylene	11.6	11.7	99	11.5	11.7	98	70 - 130	<1	25
1,1,2,2-Tetrachloroethane	17.2	18.5	93	17.0	18.5	92	70 - 130	<1	25

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340/143267  
**Sample Matrix:** Air

**Service Request:** R1105621  
**Date Analyzed:** 10/17/11

**Lab Control Sample Summary**  
**Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS**

**Analytical Method:** TO-15

**Units:** µg/m<sup>3</sup>  
**Basis:** NA

**Analysis Lot:** 266096

Analyte Name	Lab Control Sample RQ1110533-02			Duplicate Lab Control Sample RQ1110533-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Chloromethane	5.20	5.21	100	5.35	5.21	103	70 - 130	3	25
Vinyl Chloride	6.07	6.45	94	6.26	6.45	97	70 - 130	3	25
Bromomethane	8.38	9.80	86	8.45	9.80	86	70 - 130	<1	25
Chloroethane	5.93	6.59	90	6.06	6.59	92	70 - 130	2	25
Trichlorofluoromethane (CFC 11)	15.6	14.6	107	15.7	14.6	108	70 - 130	1	25
1,1-Dichloroethene	10.7	10.2	105	10.7	10.2	105	70 - 130	<1	25
Methylene Chloride	8.17	8.94	91	8.41	8.94	94	70 - 130	3	25
trans-1,2-Dichloroethene	10.4	10.3	101	10.6	10.3	103	70 - 130	2	25
1,1-Dichloroethane (1,1-DCA)	10.3	10.4	99	10.4	10.4	100	70 - 130	2	25
cis-1,2-Dichloroethene	9.50	10.4	91	9.72	10.4	93	70 - 130	2	25
Chloroform	13.3	12.8	104	13.4	12.8	104	70 - 130	<1	25
1,2-Dichloroethane	12.5	10.6	118	12.8	10.6	121	70 - 130	3	25
1,1,1-Trichloroethane (TCA)	14.9	14.0	106	15.1	14.0	108	70 - 130	1	25
Carbon Tetrachloride	17.1	16.0	106	17.3	16.0	108	70 - 130	1	25
1,2-Dichloropropane	11.9	12.1	98	11.8	12.1	97	70 - 130	<1	25
Bromodichloromethane	18.7	17.4	107	19.0	17.4	109	70 - 130	2	25
Trichloroethene (TCE)	12.8	14.0	92	13.1	14.0	94	70 - 130	2	25
cis-1,3-Dichloropropene	12.2	12.3	100	12.3	12.3	101	70 - 130	<1	25
trans-1,3-Dichloropropene	12.0	11.2	106	12.1	11.2	107	70 - 130	<1	25
1,1,2-Trichloroethane	13.7	14.5	95	13.9	14.5	96	70 - 130	1	25
Dibromochloromethane	23.1	23.2	99	23.3	23.2	100	70 - 130	<1	25
Tetrachloroethene (PCE)	17.0	17.6	96	17.1	17.6	97	70 - 130	1	25
Chlorobenzene	11.4	12.3	93	11.7	12.3	95	70 - 130	2	25
Ethylbenzene	11.0	11.5	95	11.2	11.5	97	70 - 130	2	25
m,p-Xylenes	21.7	22.8	95	22.1	22.8	97	70 - 130	2	25
Bromoform	26.7	27.1	98	27.3	27.1	101	70 - 130	2	25
o-Xylene	11.3	11.7	97	11.5	11.7	98	70 - 130	2	25
1,1,2,2-Tetrachloroethane	16.8	18.5	91	17.2	18.5	93	70 - 130	2	25

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CASROCH Contract: SHAW  
 Lab Code: 10145 Case No.: R1-5621 SAS No.: \_\_\_\_\_ SDG No.: VP-3  
 Lab File ID (Standard): B1663.D Date Analyzed: 10/14/2011  
 Instrument ID: MS#13 Time Analyzed: 9:51  
 GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR ST	145144	12.84	554576	14.49	503191	19.60
UPPER LIMIT	203202	13.34	776406	14.99	704467	20.10
LOWER LIMIT	87086	12.34	332746	13.99	301915	19.10
EPA SAMPLE NO.						
01 LCS1	148916	12.84	552676	14.49	491356	19.60
02 DLCS1	146425	12.84	556821	14.49	495683	19.60
03 VBLK1	156419	12.84	579707	14.49	494501	19.60
04 VP-6	143278	12.84	527437	14.49	454567	19.60
05 VP-5	141567	12.84	523049	14.49	450232	19.60
06 BLD6-SV1	136956	12.84	501032	14.49	437299	19.60
07 BLD6-SV2	134506	12.84	499092	14.49	435232	19.60
08 BLD6-1	135156	12.84	492670	14.49	431768	19.60
09 BLD5-1	134411	12.84	488292	14.49	431665	19.60
10 BLD5-SV2	135704	12.84	513756	14.49	554125	19.60

IS1 = bromochloromethane  
 IS2 = 1,4-difluorobenzene  
 IS3 = chlorobenzene-d5

AREA UPPER LIMIT = +40% of internal standard area

AREA LOWER LIMIT = - 40% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.

\* Values outside of contract required QC limits

## VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: CASROCH Contract: SHAW  
 Lab Code: 10145 Case No.: R1-5621 SAS No.: \_\_\_\_\_ SDG No.: VP-3  
 Lab File ID (Standard): B1686.D Date Analyzed: 10/17/2011  
 Instrument ID: MS#13 Time Analyzed: 5:27  
 GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR ST	136389	12.84	524187	14.49	493717	19.60
UPPER LIMIT	190945	13.34	733862	14.99	691204	20.10
LOWER LIMIT	81833	12.34	314512	13.99	296230	19.10
EPA SAMPLE NO.						
01 LCS2	135617	12.84	520931	14.49	469537	19.60
02 DLCS2	136507	12.84	521580	14.49	465029	19.60
03 VBLK2	140499	12.84	521260	14.49	448792	19.60
04 BLD6-SV3	133596	12.84	499822	14.49	439910	19.60
05 BLD5-SV1	129533	12.84	481963	14.49	433761	19.60
06 BLD5-SV3	142503	12.83	538684	14.49	469356	19.60
07 BLD3-3	139338	12.84	521556	14.49	456963	19.60
08 BLD3-2	131632	12.83	492419	14.49	434080	19.59
09 BLD2-6	133678	12.84	494321	14.49	438770	19.60
10 BLD6-2	128726	12.84	482114	14.49	432053	19.60
11 BLD5-2	132965	12.84	494066	14.49	485996	19.60
12 BLD5-3	135770	12.84	508328	14.49	468761	19.60
13 BLD5-4	133935	12.84	497394	14.49	456896	19.60
14 BLD5-SV2DL	128792	12.84	492900	14.49	503336	19.60
15 VP-3	137323	12.84	508241	14.49	451829	19.60

IS1 = bromochloromethane  
 IS2 = 1,4-difluorobenzene  
 IS3 = chlorobenzene-d5

AREA UPPER LIMIT = +40% of internal standard area  
 AREA LOWER LIMIT = - 40% of internal standard area  
 RT UPPER LIMIT = +0.50 minutes of internal standard RT  
 RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column to be used to flag values outside QC limit with an asterisk.

\* Values outside of contract required QC limits



Detailed Sample Information

CAS Sample ID	Client Sample ID	Container Type	Pi1 (Hg)	Pi1 (psig)	Pf1	Pi2 (Hg)	Pi2 (psig)	Pf2	Cont ID	Order #	FC ID
R1105621-001.01	VP-3	1.4 L-Non-Specified SC	-3.10	-1.52	14.30				SS00015	26986	FC00753
R1105621-002.01	VP-5	1.4 L-Non-Specified SC	-2.60	-1.28	14.30				SS00016	26986	FC00715
R1105621-003.01	VP-6	1.4 L-Non-Specified SC	-2.60	-1.28	14.30				SS00001	26986	FC00719
R1105621-004.01	BLDG 3-3	1.4 L-Non-Specified SC	-1.80	-0.88	14.30				SS00010	26986	FC00850
R1105621-005.01	BLDG 3-2	1.4 L-Non-Specified SC	-3.00	-1.47	14.30				SS00021	26986	FC00852
R1105621-006.01	BLDG 2-6	1.4 L-Non-Specified SC	-2.40	-1.18	14.30				SS00028	26986	FC00851
R1105621-007.01	BLDG 6-SV1	1.4 L-Non-Specified SC	-3.10	-1.52	14.30				SS00014	26986	FC00750
R1105621-008.01	BDLG 6-SV2	1.4 L-Non-Specified SC	-2.30	-1.13	14.30				SS00002	26986	FC00823
R1105621-009.01	BLDG 6-SV3	1.4 L-Non-Specified SC	-3.00	-1.47	14.30				SS00023	26986	FC00832
R1105621-010.01	BLDG 6-1	1.4 L-Non-Specified SC	-4.50	-2.21	14.30				SS00009	26986	FC00855
R1105621-011.01	BLDG 6-2	1.4 L-Non-Specified SC	-1.90	-0.93	14.30				SS00003	26986	FC00853
R1105621-012.01	BLDG 5-1	1.4 L-Non-Specified SC	-3.10	-1.52	14.30				SS00005	26986	FC00847
R1105621-013.01	BLDG 5-2	1.4 L-Non-Specified SC	-2.50	-1.23	14.30				SS00008	26986	FC00846
R1105621-014.01	BLDG 5-3	1.4 L-Non-Specified SC	-2.70	-1.33	14.30				SS00018	26986	FC00845
R1105621-015.01	BLDG 5-4	1.4 L-Non-Specified SC	-4.80	-2.36	14.30				SS00024	26986	FC00849
R1105621-016.01	BLDG 5-SV1	1.4 L-Non-Specified SC	-1.30	-0.64	14.30				SS00022	26986	FC00831
R1105621-017.01	BLDG 5-SV2	1.4 L-Non-Specified SC	-2.40	-1.18	14.30				SS00027	26986	FC00830
R1105621-018.01	BLDG 5-SV3	1.4 L-Non-Specified SC	-2.30	-1.13	14.30				SS00017	26986	FC00749

Miscellaneous Items - received

Sample Collection Supplies



T019262

Order #: 26986  
Date Required: 10/4/11  
Project Chemist: Michael Perry  
Phone Number: 585-288-5380 x7469

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly  
SDG Name: Varian Beverly Air Samples  
P.O. Number: 635358  
Shipped To: Paul LaDoux  
100 Technology Center  
Stoughton, MA 02072  
Phone: 617-589-6163

Shipped Date: 10/03/2011  
Shipping Cost: \$ 0.00

Comments: Bag containers by sample template.

**Grouped by Container Type**

Container	Shipped Pressure
1.4L-Non-Specified	1.4L Summa Canister

**Precautions:** Preserved sample containers should not be overflowed while filling. Under no circumstances should the inside of the containers or lids be handled.

**Please return this form with your coolers when delivering your samples to Columbia Analytical Services.**

# Sample Collection Supplies



T019262

Order #: 26986  
Date Required: 10/4/11  
Project Chemist: Michael Perry  
Phone Number: 585-288-5380 x7469

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly  
SDG Name: Varian Beverly Air Samples

P.O. Number: 635358

Shipped Date: 10/03/2011  
Shipping Cost: \$ 0.00

Shipped To: Paul LaDoux  
100 Technology Center  
Stoughton, MA 02072

Phone: 617-589-6163

**Comments: Bag containers by sample template.**

FC00849	1 each-Flow Controller Stainless Steel	
FC00850	1 each-Flow Controller Stainless Steel	
FC00846	1 each-Flow Controller Stainless Steel	
FC00847	1 each-Flow Controller Stainless Steel	
FC00852	1 each-Flow Controller Stainless Steel	
IRC00845	1 each-Flow Controller Stainless Steel	
FC00851	1 each-Flow Controller Stainless Steel	
FC00855	1 each-Flow Controller Stainless Steel	
FC00853	1 each-Flow Controller Stainless Steel	
FC00830	1 each-Flow Controller Stainless Steel	
FC00719	1 each-Flow Controller Stainless Steel	
FC00823	1 each-Flow Controller Stainless Steel	
FC00750	1 each-Flow Controller Stainless Steel	
FC00753	1 each-Flow Controller Stainless Steel	
FC00715	1 each-Flow Controller Stainless Steel	
FC00832	1 each-Flow Controller Stainless Steel	
FC00831	1 each-Flow Controller Stainless Steel	
FC00749	1 each-Flow Controller Stainless Steel	
SS00008	1.4 L-Non-Specified SC	-29.00
SS00005	1.4 L-Non-Specified SC	-29.00
SS00027	1.4 L-Non-Specified SC	-29.00
SS00024	1.4 L-Non-Specified SC	-29.00
SS00017	1.4 L-Non-Specified SC	-29.00
SS00014	1.4 L-Non-Specified SC	-29.00
SS00018	1.4 L-Non-Specified SC	-29.00
SS00015	1.4 L-Non-Specified SC	-29.00
SS00028	1.4 L-Non-Specified SC	-29.00
SS00023	1.4 L-Non-Specified SC	-29.00
SS00022	1.4 L-Non-Specified SC	-29.00
SS00002	1.4 L-Non-Specified SC	-29.00
SS00016	1.4 L-Non-Specified SC	-29.00
SS00010	1.4 L-Non-Specified SC	-29.00
SS00001	1.4 L-Non-Specified SC	-29.00
SS00009	1.4 L-Non-Specified SC	-29.00
SS00021	1.4 L-Non-Specified SC	-29.00

**Precautions:** Preserved sample containers should not be overflowed while filling. Under no circumstances should the inside of the containers or lids be handled.

**Please return this form with your coolers when delivering your samples to Columbia Analytical Services.**

Sample Collection Supplies



T019262

Order #: 26986  
Date Required: 10/4/11  
Project Chemist: Michael Perry  
Phone Number: 585-288-5380 x7469

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly  
SDG Name: Varian Beverly Air Samples  
P.O. Number: 635358  
Shipped To: Paul LaDoux  
100 Technology Center  
Stoughton, MA 02072  
Phone: 617-589-6163

Shipped Date: 10/03/2011  
Shipping Cost: \$ 0.00

Comments: Bag containers by sample template.

SS00003 1.4 L-Non-Specified SC -29.00

**Grouped by Sample Template**

Sample Template Number / Name	Expected Number of Samples	Containers	Number of Containers per Sample	Comments
002 / TO-15 - Bull List	18			
		1.4L-Non-Specified SC - TO-15	1	1.4L Summa Canister

Quantity	Miscellaneous Supply
9	Flow Controller, 6L, 2hr
9	Flow Controller, 6L, 4hr

**Precautions:** Preserved sample containers should not be overflowed while filling. Under no circumstances should the inside of the containers or lids be handled.

**Please return this form with your coolers when delivering your samples to Columbia Analytical Services.**

Columbia Analytical Services, Inc.  
 1565 Jefferson Rd, Building 300  
 Suite 360  
 Rochester, NY 14623  
 Ph. 585-288-5380  
 Fax 585-288-8475

<u>Container IDs</u>	<u>Cleaned Date</u>	<u>Date Analyzed</u>	<u>QC Results</u>	<u>Comments</u>
FC00715	5/16/11	5/17/11		
FC00719	5/16/11	5/17/11		
FC00749	5/16/11	5/17/11		
FC00750	5/16/11	5/17/11		
FC00753	5/16/11	5/17/11		
FC00823	5/16/11	5/17/11		
FC00830	6/15/11	6/16/11		
FC00831	5/16/11	5/17/11		
FC00832	6/15/11	6/16/11		
FC00845	6/29/11	8/29/11		
FC00846	3/22/11	3/22/11		
FC00847	6/29/11	8/29/11		
FC00849	6/29/11	8/29/11		
FC00850	3/22/11	3/22/11		
FC00851	3/15/11	3/15/11		
FC00852	6/29/11	8/29/11		
FC00853	6/29/11	8/29/11		
FC00855	3/22/11	3/22/11		
SS00001	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00002	6/6/11	6/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00003	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00005	4/12/11	4/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00008	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00009	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00010	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00014	7/5/11	7/7/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00015	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)

00000

\* QC Canister



<u>Container IDs</u>	<u>Cleaned Date</u>	<u>Date Analyzed</u>	<u>QC Results</u>	<u>Comments</u>
SS00016	6/6/11	6/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00017	7/5/11	7/7/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00018	7/5/11	7/7/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00021	6/6/11	6/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00022	6/6/11	6/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00023	6/6/11	6/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00024	7/5/11	7/7/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00027	4/26/11	4/28/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SS00028	6/6/11	6/14/11	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)

05040

\* QC Canister

# Air - Chain of Custody Record & Analytical Service Request

Rochester, New York 14609-6925  
 Phone (585) 288-5380  
 Fax (585) 288-8475



CAS Project No.

Requested Turnaround Time in Business Days From Receipt, please circle  
 1 Day 2 Day 3 Day 4 Day 5 Day 10 Day-Standard

CAS Contact:

Project Name  
 Varian Beverly  
 Project Number  
 143267  
 P.O. # / Billing Information  
 PO 727459

Company Name & Address (Reporting Information)  
 Shaw Environmental, Inc.  
 100 Technology Center Drive  
 Stoughton, MA 02072  
 Project Manager  
 Raymond Cadorette  
 Phone  
 617-589-6102  
 Fax  
 617-589-5495

Sampler (Print & Sign) Paul Ledoux

Email Address for Result Reporting  
 Raymond.Cadorette@Shawgrp.com

Analysis Method and/or Analytes

TO15 (Site Specific List)

Comments  
 Specific Instructions

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID	Hg Start	Hg End
VP-3		10.6.11	1359	00015	00753	30	3.5
VP-5			1401	00016	00715	30	4.0
VP-6			1402	00001	00719	30	4.0
Bldg 3-3			1542	00010	00850	30	3.0
Bldg 3-2			1540	00021	00852	30	4.0
Bldg 2-6			1541	00028	00851	30	3.5

R1105621

Shaw Environmental & Infrastructure, Inc.  
 Varian Beverly Air Sampler



Report Tier Levels - please select  
 Tier I - (Results/Default if not specified) \_\_\_\_\_  
 Tier II (Results + QC) \_\_\_\_\_  
 Tier III (CLP Forms Only) \_\_\_\_\_  
 Tier IV (Data Validation) \_\_\_\_\_

EDD required  Yes No  
 Type: GISKey

Project Requirements (MRLs, QAPP)  
 QA/QC: MADEP CAM

Relinquished by: (Signature) <i>Raymond Cadorette</i>	Date: 10.7.11	Time: 1500	Received by: (Signature) <i>Paul Ledoux</i>	Date: 10/6/11	Time: 0913
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:

# Air - Chain of Custody Record & Analytical Service Request

Rochester, New York 14609-6925  
 Phone (585) 288-5380  
 Fax (585) 288-8475



Requested Turnaround Time in Business Days From Receipt, please circle  
 1 Day 2 Day 3 Day 4 Day 5 Day 10 Day-Standard

CAS Project No.

CAS Contact:

Company Name & Address (Reporting Information)  
 Shaw Environmental, Inc.  
 100 Technology Center Drive  
 Stoughton, MA 02072  
 Project Manager  
 Raymond Cadorette  
 Phone 617-589-6102  
 Fax 617-589-5495

Project Name  
 Varian Beverly  
 Project Number  
 139340  
 P.O. # / Billing Information  
 PO 727661

Sampler (Print & Sign) Paul Ledoux

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID	1st start	#9 End	T015 (Site Specific List)	Analysis Method and/or Analytes	Comments Specific Instructions
Bldg 6-SV1		10.6.11	1408	00014	00750	30	5.0	1		
Bldg 6-SV2			1415	00002	00883	30	3.0	1		
Bldg 6-SV3			1413	00033	00832	30	3.0	1		
Bldg 6-1			1530	00009	00855	29.5	4.5	1		
Bldg 6-2			1544	00003	00853	30	3.0	1		
Bldg 5-1		10.7.11	1242	00005	00847	29.5	4.0	1		
Bldg 5-2			1235	00008	00846	30	4.0	1		
Bldg 5-3			1240	00018	00845	30	4.0	1		
Bldg 5-4			1230	00034	00849	30+	4.0	1		
Bldg 5-SV1			1125	00072	00831	30+	3.5	1		
Bldg 5-SV2			1111	00067	00830	30	3.5	1		
Bldg 5-SV3			1117	00017	00749	30	4.0	1		

Report Tier Levels - please select  
 Tier I - (Results/Default if not specified) \_\_\_\_\_  
 Tier II (Results + QC) \_\_\_\_\_  
 Tier III (CLP Forms Only) \_\_\_\_\_  
 Tier IV (Data Validation) \_\_\_\_\_

EDD required  Yes  No  
 Type: GISKey

ug/m3 & EDD Units: ppbv

Received by: (Signature) *Raymond Cadorette* Date: 10/10/11 Time: 0913  
 Received by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: (Signature) \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Project Requirements (MRLs, QAPP)  
 QA/QC: MADEP CAM

### Cooler Receipt And Preservation Check Form

Project/Client Shaw Folder Number \_\_\_\_\_

Cooler received on 10/10/11 by: AD COURIER: CAS UPS FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did VOA vials, Alkalinity, or Sulfide have significant\* air bubbles? YES NO N/A
5. Were Ice or Ice packs present? YES NO
6. Where did the bottles originate? CAS/ROG, CLIENT
7. Temperature of cooler(s) upon receipt: AIR

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes  
 If No, Explain Below No No No No No

Date/Time Temperatures Taken: AIR

Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition, Client Approval to Run Samples: \_\_\_\_\_

PC Secondary Review: MVP 10/10/11

Cooler Breakdown: Date: \_\_\_\_\_ Time: \_\_\_\_\_ by: \_\_\_\_\_

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

pH	Reagent			Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
		YES	NO						
≥12	NaOH								
≤2	HNO <sub>3</sub>								
≤2	H <sub>2</sub> SO <sub>4</sub>								
Residual Chlorine (-)	For TCN and Phenol			If present, contact PM to add ascorbic acid					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*						

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: \_\_\_\_\_

Bottle lot numbers: \_\_\_\_\_  
 Other Comments: \_\_\_\_\_

PC Secondary Review: MVP 10/25/11  
 H:\SMODOCS\Cooler Receipt 3.doc

\*significant air bubbles: VOA > 5-6 mm ; WC > 1 in. diameter

## Data Usability Worksheet

**Project Name :** Varian Medical Systems, Inc **Job Number :** 143276  
**Prepared By:** Jennifer Gailey **Date :** 6/7/2012  
**Analyte Group :** Volatile Organics **Analytical Method :** 8260C  
                           Metabolic Acid HPLC  
                           Methane, Ethane, Ethene RSK 175

**Completed MADEP CAM Certification Form included:** Yes **Laboratory ID No. :** R1202156  
**Chain of Custody included in Data Package ?** Yes **Is it Complete ?** Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
4/03, 4/04/2012	VOC 8260B		14 days	4/9, 4/10, 4/11/2012
4/03, 4/04/2013	Metabolic Acid HPLC		14 days	4/6, 4/7, 4/9, 4/10, 4/11/2012
4/03, 4/04/2014	RSK 175		14 days	4/6, 4/7, 4/9, 4/10, 4/11/2012

**Sample temperature within QC limits:** Yes

### Surrogate Recovery

Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

### MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? Yes

If No, list sample ID, date and compound where limit was exceeded: NA

### Laboratory Control Samples

Are all laboratory control sample recoveries within the QC limits ? No

If no, list sample ID where range was exceeded: For method 8260C the blank spike for LCSD recoveries were outside control limits for trans-1,3-dichloropropene on the LCSD from 4/10/2012.

For metabolic acid analysis the blank spike for LCS recovery for Butyric Acid was outside QC limits.

**Equipment Field Blank ID :** EB-3 4/10/2012  
**Trip Blank ID :** Trip Blank 3 4/10/2012

**Method Blank:** VOC 8260B 4/9, 4/10, 4/11/2012  
                           Metabolic Acid HPLC 4/6, 4/10/2012  
                           RSK 175 4/6, 4/11/2012

**Were any compounds identified in the method blank, field blank or trip blank above detection limits ?** No

**If so, list Sample ID/Compound/Concentration/Units:**

### Notes:

VOCs - Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the methods. Samples AP25-DO, BW-8, and SW-9 were reanalyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

For Modified RSK-175 - Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the methods. Samples AP-23-DO, AP-24-DO, BW-4, BW-8, BW-9, OB9-BR, OB9-S and unnamed stream were reanalyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

**Reviewed By:** Pernilla Haley



April 18, 2012

Service Request No: R1202156

Mr. Ray Cadorette  
Shaw Environmental & Infrastructure, Inc.  
100 Technology Center  
Stoughton, MA 02072

**Laboratory Results for: Varian Beverly/143276-02000000**

Dear Mr. Cadorette:

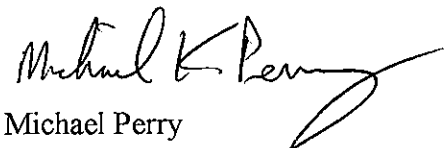
Enclosed are the results of the sample(s) submitted to our laboratory on April 5, 2012. For your reference, these analyses have been assigned our service request number **R1202156**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

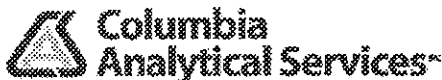
Please contact me if you have any questions. My extension is 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc. dba ALS Environmental**

  
Michael Perry  
Laboratory Manager

Page 1 of 96



ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623

PHONE 585-288-5380 | FAX 585-288-8475

Columbia Analytical Services, Inc.

Part of the ALS Group A Campbell Brothers Limited Company

**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** Shaw Environmental, Inc  
**Project:** Varian Beverly  
**Sample Matrix:** Water

**Service Request No.:** R1202156  
**Project Number:** 143276-02000000  
**Date Received:** 4/05/12

**CASE NARRATIVE**

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II, deliverables with Massachusetts CAM analyses reporting. When appropriate to the method, method blank results have been reported with each analytical test.

**Sample Receipt**

Water samples were collected on 4/03/12 and 4/04/12 and received at CAS in good condition at a cooler temperature of 8.9 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and CAS Job #.

**Volatile Organics**

Twenty-four water samples were analyzed for a site list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples AP25-DO, BW-8, and BW-9 were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial and continuing calibrations were compliant.

All Surrogate Standard recoveries were within QC limits.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits except trans-1,3-dichloropropene on the LCSD from 4/10/12. This recovery was flagged with an "\*\*".

All samples were analyzed within the required holding time of 14 days.

No other analytical or QC problems were encountered with these analyses.

**Metabolic Acid Analysis**

Fifteen water samples were analyzed for Metabolic Acids by HPLC using a modified in house method. Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method.

All the initial and continuing calibration criteria were met for all analytes except as noted below.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits except Butyric Acid on the LCS from 4/10/12. This recovery was flagged with an "\*\*".

The Method Blanks associated with these samples are free of contamination.

No other analytical or QC problems were encountered.

**Modified RSK-175**

Fifteen water samples were analyzed for the hydrocarbon gases Methane, Ethane, and Ethene by modified RSK-175.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples AP23-DO, AP24-DO, BW-4, BW-5, BW-8, BW-9, OB9-BR, OB9-S, and Unnamed Stream were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All the initial and continuing calibration criteria were met for all analytes.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

The Method Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.



## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R1202156

<u>Lab ID</u>	<u>Client ID</u>
R1202156-001	AP13-DO
R1202156-002	AP23-DO
R1202156-003	AP24-DO
R1202156-004	AP25-DO
R1202156-005	BW-4
R1202156-006	BW-5
R1202156-007	BW-6
R1202156-008	BW-8
R1202156-009	BW-9
R1202156-010	MW-8
R1202156-011	MW-9
R1202156-012	OB9-BR
R1202156-013	OB9-DO
R1202156-014	OB9-S
R1202156-015	OB10-S
R1202156-016	OB10-DO
R1202156-017	OB12-S
R1202156-018	OB12-DO
R1202156-019	OB15-S
R1202156-020	OB19-DO
R1202156-021	STR-3
R1202156-022	Unnamed Stream
R1202156-023	Trip Blank 3
R1202156-024	EB-3

## MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc.

Project #: 143276-02000000

Project Location: Varian Beverly

RTN:

**This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):**  
R1202156 - 001 - 024

Matrices:  Groundwater  Soil/Sediment  Drinking Water  Air  Other: \_\_\_\_\_

**CAM Protocol** (check all that apply below):

8260 VOC CAM II A <input checked="" type="checkbox"/>	7470/7471 Hg CAM III B <input type="checkbox"/>	MassDEP VPH CAM IV A <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>
6010 Metals CAM III A <input type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	8082 PCB CAM V A <input type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6850 Perchlorate CAM VIII B <input type="checkbox"/>	Other: RSK-175 and Organic Acids

**Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes <input type="checkbox"/> No
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes <input type="checkbox"/> No
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes <input type="checkbox"/> No
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes <input type="checkbox"/> No
<b>E</b>	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes <input type="checkbox"/> No

**Responses to Questions G, H and I below are required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes <input type="checkbox"/> No <sup>1</sup>
----------	-----------------------------------------------------------------------------------------------------------	------------------------------------------------

**Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	X Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)? <span style="font-size: small;">site list</span>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup>All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Michael K. Perry

Position: Laboratory Manager

Printed Name: Michael K. Perry

Date: 4/18/12 00005

## REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
- H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.



**CAS/Rochester Lab ID # for Massachusetts Certification**  
M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

*The Commonwealth of Massachusetts*



*Department of Environmental Protection*

*Division of Environmental Analysis  
Senator William X. Wall Experiment Station*

*certifies*

M-NY032

COLUMBIA ANALYTICAL SERVICES  
1565 JEFFERSON RD  
BUILDING 300, SUITE 360  
ROCHESTER, NY 14623-0000

*Laboratory Director:* Michael K. Perry

*for the analysis of* NON POTABLE WATER (CHEMISTRY)

*pursuant to 310 CMR 42.00*

*This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.*

*This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.*

*Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.*



*Director, Division of Environmental Analysis*

*Issued:* 01 JUL 2011

*Expires:* 30 JUN 2012

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

<u>Analytes</u>	<u>Methods</u>
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
PH	SM 4500-H-B
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CaCO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)	Effective Date	25 AUG 2011	Expiration Date	30 JUN 2012
<u>Analytes</u>			<u>Methods</u>	
ALKALINITY, TOTAL			SM 2320B	
CHLORIDE			SM 4500-CL-E	
CHLORIDE			EPA 300.0	
FLUORIDE			EPA 300.0	
SULFATE			EPA 300.0	
AMMONIA-N			EPA 350.1	
NITRATE-N			EPA 300.0	
NITRATE-N			EPA 353.2	
KJELDAHL-N			EPA 351.2	
ORTHOPHOSPHATE			EPA 365.1	
PHOSPHORUS, TOTAL			EPA 365.1	
CHEMICAL OXYGEN DEMAND			EPA 410.4	
BIOCHEMICAL OXYGEN DEMAND			SM 5210B	
TOTAL ORGANIC CARBON			SM 5310C	
CYANIDE, TOTAL			EPA 335.4	
NON-FILTERABLE RESIDUE			SM 2540D	
OIL AND GREASE			EPA 1664	
PHENOLICS, TOTAL			EPA 420.4	
VOLATILE HALOCARBONS			EPA 801	
VOLATILE HALOCARBONS			EPA 624	
VOLATILE AROMATICS			EPA 602	
VOLATILE AROMATICS			EPA 624	
SVOC-ACID EXTRACTABLES			EPA 625	
SVOC-BASE/NEUTRAL EXTRACTABLES			EPA 625	
POLYCHLORINATED BIPHENYLS (WATEF			EPA 608	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1355  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 14:35

**Sample Name:** AP13-DO  
**Lab Code:** R1202156-001

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\040912\U7691.D\

**Analysis Lot:** 286620  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 2000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	25000		4000	
79-34-5	1,1,2,2-Tetrachloroethane	4000	U	4000	
79-00-5	1,1,2-Trichloroethane	4000	U	4000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4000	U	4000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4000	U	4000	
107-06-2	1,2-Dichloroethane	4000	U	4000	
78-87-5	1,2-Dichloropropane	4000	U	4000	
67-64-1	Acetone	20000	U	20000	
75-27-4	Bromodichloromethane	4000	U	4000	
75-25-2	Bromoform	4000	U	4000	
74-83-9	Bromomethane	4000	U	4000	
56-23-5	Carbon Tetrachloride	4000	U	4000	
108-90-7	Chlorobenzene	4000	U	4000	
75-00-3	Chloroethane	4000	U	4000	
67-66-3	Chloroform	4000	U	4000	
74-87-3	Chloromethane	4000	U	4000	
124-48-1	Dibromochloromethane	4000	U	4000	
75-09-2	Methylene Chloride	4000	U	4000	
127-18-4	Tetrachloroethene (PCE)	59000		4000	
79-01-6	Trichloroethene (TCE)	320000		4000	
75-69-4	Trichlorofluoromethane (CFC 11)	4000	U	4000	
75-01-4	Vinyl Chloride	4000	U	4000	
156-59-2	cis-1,2-Dichloroethene	4000	U	4000	
10061-01-5	cis-1,3-Dichloropropene	4000	U	4000	
156-60-5	trans-1,2-Dichloroethene	4000	U	4000	
10061-02-6	trans-1,3-Dichloropropene	4000	U	4000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/9/12 14:35	
Dibromofluoromethane	100	70-130	4/9/12 14:35	
Toluene-d8	97	70-130	4/9/12 14:35	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 1355  
Date Received: 4/ 5/12  
Date Analyzed: 4/6/12 11:24

Sample Name: AP13-DO  
Lab Code: R1202156-001

Units: µg/L  
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175  
Data File Name: star1502.run

Analysis Lot: 286366  
Instrument Name: R-GC-02  
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	
74-85-1	Ethene	3.3	1.0	
74-82-8	Methane	2.3	2.0	



COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 1355  
Date Received: 4/ 5/12  
Date Analyzed: 4/10/12 10:39

Sample Name: AP13-DO  
Lab Code: R1202156-001

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQUADATA\HPLC05\DATA\040912\X0007851.D\

Analysis Lot: 286801  
Instrument Name: R-HPLC-05  
Dilution Factor: 10

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	5.0	U	5.0	
64-19-7	Acetic Acid	1200		10	
107-92-6	Butanoic Acid (Butyric Acid)	20		20	
50-21-5	Lactic Acid	290		10	
79-09-4	Propionic Acid	16		10	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1410  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 15:08

**Sample Name:** AP23-DO  
**Lab Code:** R1202156-002

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\040912\U7692.D\

**Analysis Lot:** 286620  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 2000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4000	U	4000	
79-34-5	1,1,2,2-Tetrachloroethane	4000	U	4000	
79-00-5	1,1,2-Trichloroethane	4000	U	4000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4000	U	4000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4000	U	4000	
107-06-2	1,2-Dichloroethane	4000	U	4000	
78-87-5	1,2-Dichloropropane	4000	U	4000	
67-64-1	Acetone	20000	U	20000	
75-27-4	Bromodichloromethane	4000	U	4000	
75-25-2	Bromoform	4000	U	4000	
74-83-9	Bromomethane	4000	U	4000	
56-23-5	Carbon Tetrachloride	4000	U	4000	
108-90-7	Chlorobenzene	4000	U	4000	
75-00-3	Chloroethane	4000	U	4000	
67-66-3	Chloroform	4000	U	4000	
74-87-3	Chloromethane	4000	U	4000	
124-48-1	Dibromochloromethane	4000	U	4000	
75-09-2	Methylene Chloride	4000	U	4000	
127-18-4	Tetrachloroethene (PCE)	21000		4000	
79-01-6	Trichloroethene (TCE)	350000		4000	
75-69-4	Trichlorofluoromethane (CFC 11)	4000	U	4000	
75-01-4	Vinyl Chloride	4000	U	4000	
156-59-2	cis-1,2-Dichloroethene	4000	U	4000	
10061-01-5	cis-1,3-Dichloropropene	4000	U	4000	
156-60-5	trans-1,2-Dichloroethene	4000	U	4000	
10061-02-6	trans-1,3-Dichloropropene	4000	U	4000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/9/12 15:08	
Dibromofluoromethane	102	70-130	4/9/12 15:08	
Toluene-d8	98	70-130	4/9/12 15:08	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1410  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/6/12 11:33

**Sample Name:** AP23-DO  
**Lab Code:** R1202156-002

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star1503.run

**Analysis Lot:** 286366  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 4

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	4.0	U	4.0	
74-85-1	Ethene	510	E	4.0	
74-82-8	Methane	130		8.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 14:10  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/6/12 11:44

**Sample Name:** AP23-DO  
**Lab Code:** R1202156-002  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star1504.run

**Analysis Lot:** 286366  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	10 U	10	
74-85-1	Ethene	510 D	10	
74-82-8	Methane	130 D	20	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 1410  
Date Received: 4/ 5/12  
Date Analyzed: 4/10/12 11:43

Sample Name: AP23-DO  
Lab Code: R1202156-002

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQDATA\HPLC05\DATA\040912\X0007853.D\

Analysis Lot: 286801  
Instrument Name: R-HPLC-05  
Dilution Factor: 2

CAS No.	Analyte Name	Result Q	MRL	Note
127-17-3	Pyruvic Acid	1.0 U	1.0	
64-19-7	Acetic Acid	190	2.0	
107-92-6	Butanoic Acid (Butyric Acid)	17	4.0	
50-21-5	Lactic Acid	4.1	2.0	
79-09-4	Propionic Acid	290	2.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1330  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 17:31

**Sample Name:** AP24-DO  
**Lab Code:** R1202156-003

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041012\U7740.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 2000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	27000		4000	
79-34-5	1,1,2,2-Tetrachloroethane	4000	U	4000	
79-00-5	1,1,2-Trichloroethane	4000	U	4000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4000	U	4000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4000	U	4000	
107-06-2	1,2-Dichloroethane	4000	U	4000	
78-87-5	1,2-Dichloropropane	4000	U	4000	
67-64-1	Acetone	20000	U	20000	
75-27-4	Bromodichloromethane	4000	U	4000	
75-25-2	Bromoform	4000	U	4000	
74-83-9	Bromomethane	4000	U	4000	
56-23-5	Carbon Tetrachloride	4000	U	4000	
108-90-7	Chlorobenzene	4000	U	4000	
75-00-3	Chloroethane	4000	U	4000	
67-66-3	Chloroform	4000	U	4000	
74-87-3	Chloromethane	4000	U	4000	
124-48-1	Dibromochloromethane	4000	U	4000	
75-09-2	Methylene Chloride	4000	U	4000	
127-18-4	Tetrachloroethene (PCE)	26000		4000	
79-01-6	Trichloroethene (TCE)	240000		4000	
75-69-4	Trichlorofluoromethane (CFC 11)	4000	U	4000	
75-01-4	Vinyl Chloride	26000		4000	
156-59-2	cis-1,2-Dichloroethene	80000		4000	
10061-01-5	cis-1,3-Dichloropropene	4000	U	4000	
156-60-5	trans-1,2-Dichloroethene	4000	U	4000	
10061-02-6	trans-1,3-Dichloropropene	4000	U	4000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/10/12 17:31	
Dibromofluoromethane	100	70-130	4/10/12 17:31	
Toluene-d8	99	70-130	4/10/12 17:31	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1330  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/6/12 12:19

**Sample Name:** AP24-DO  
**Lab Code:** R1202156-003

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1505.run

**Analysis Lot:** 286366  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 4

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	4.0 U	4.0	
74-85-1	Ethene	5400 E	4.0	
74-82-8	Methane	8.0 U	8.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1330  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/6/12 12:58

**Sample Name:** AP24-DO  
**Lab Code:** R1202156-003  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1506.run

**Analysis Lot:** 286366  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 100

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	100	U	100	
74-85-1	Ethene	5100	D	100	
74-82-8	Methane	200	U	200	



COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 1330  
Date Received: 4/ 5/12  
Date Analyzed: 4/9/12 20:25

Sample Name: AP24-DO  
Lab Code: R1202156-003

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQUDATA\HPLC05\DATA\040912\X0007824.D\

Analysis Lot: 286801  
Instrument Name: R-HPLC-05  
Dilution Factor: 5

CAS No.	Analyte Name	Result Q	MRL	Note
127-17-3	Pyruvic Acid	2.5 U	2.5	
64-19-7	Acetic Acid	380	5.0	
107-92-6	Butanoic Acid (Butyric Acid)	54	10	
50-21-5	Lactic Acid	5.0 U	5.0	
79-09-4	Propionic Acid	420	5.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1315  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 16:15

**Sample Name:** AP25-DO  
**Lab Code:** R1202156-004

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\040912\U7694.D\

**Analysis Lot:** 286620  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	40	U	40	
79-01-6	Trichloroethene (TCE)	40	U	40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	1100		40	
156-59-2	cis-1,2-Dichloroethene	7800	E	40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/9/12 16:15	
Dibromofluoromethane	99	70-130	4/9/12 16:15	
Toluene-d8	98	70-130	4/9/12 16:15	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1315  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 18:04

**Sample Name:** AP25-DO  
**Lab Code:** R1202156-004  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041012\U7741.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	100	U	100	
79-01-6	Trichloroethene (TCE)	100	U	100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	1100	D	100	
156-59-2	cis-1,2-Dichloroethene	7500	D	100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/10/12 18:04	
Dibromofluoromethane	103	70-130	4/10/12 18:04	
Toluene-d8	100	70-130	4/10/12 18:04	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1140  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 16:47

**Sample Name:** BW-4  
**Lab Code:** R1202156-005

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\040912\U7695.D\

**Analysis Lot:** 286620  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/9/12 16:47	
Dibromofluoromethane	100	70-130	4/9/12 16:47	
Toluene-d8	98	70-130	4/9/12 16:47	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1140  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/6/12 13:42

**Sample Name:** BW-4  
**Lab Code:** R1202156-005

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star1510.run

**Analysis Lot:** 286366  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	28		1.0	
74-85-1	Ethene	70		1.0	
74-82-8	Methane	540	E	2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1140  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/6/12 14:20

**Sample Name:** BW-4  
**Lab Code:** R1202156-005  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1512.run

**Analysis Lot:** 286366  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 25

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	25 U	25	
74-85-1	Ethene	54 D	25	
74-82-8	Methane	1200 D	50	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 1140  
Date Received: 4/ 5/12  
Date Analyzed: 4/9/12 21:29

Sample Name: BW-4  
Lab Code: R1202156-005

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQU\DATA\HPLC05\DATA\040912\X0007826.D\

Analysis Lot: 286801  
Instrument Name: R-HPLC-05  
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
127-17-3	Pyruvic Acid	0.50 U	0.50	
64-19-7	Acetic Acid	1.0 U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0 U	2.0	
50-21-5	Lactic Acid	1.0 U	1.0	
79-09-4	Propionic Acid	1.0 U	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1115  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 15:19

**Sample Name:** BW-5  
**Lab Code:** R1202156-006

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041012\U7736.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.1		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	5.0		2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	4/10/12 15:19	
Dibromofluoromethane	99	70-130	4/10/12 15:19	
Toluene-d8	96	70-130	4/10/12 15:19	



COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 1115  
Date Received: 4/ 5/12  
Date Analyzed: 4/6/12 14:31

Sample Name: BW-5  
Lab Code: R1202156-006

Units: µg/L  
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175  
Data File Name: star1513.run

Analysis Lot: 286366  
Instrument Name: R-GC-02  
Dilution Factor: 2.5

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	67	2.5	
74-85-1	Ethene	720 E	2.5	
74-82-8	Methane	570 E	5.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1115  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/6/12 14:43

**Sample Name:** BW-5  
**Lab Code:** R1202156-006  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1514.run

**Analysis Lot:** 286366  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	69 D	10	
74-85-1	Ethene	750 D	10	
74-82-8	Methane	600 D	20	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 1115  
Date Received: 4/ 5/12  
Date Analyzed: 4/9/12 22:32

Sample Name: BW-5  
Lab Code: R1202156-006

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQ\DATA\HPLC05\DATA\040912\X0007828.D\

Analysis Lot: 286801  
Instrument Name: R-HPLC-05  
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
127-17-3	Pyruvic Acid	0.50 U	0.50	
64-19-7	Acetic Acid	1.0 U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0 U	2.0	
50-21-5	Lactic Acid	1.0 U	1.0	
79-09-4	Propionic Acid	1.0 U	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1100  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 18:37

**Sample Name:** BW-6  
**Lab Code:** R1202156-007

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041012\U7742.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	12		5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	380		5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	4/10/12 18:37	
Dibromofluoromethane	101	70-130	4/10/12 18:37	
Toluene-d8	97	70-130	4/10/12 18:37	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1100  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/6/12 13:22

**Sample Name:** BW-6  
**Lab Code:** R1202156-007

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star1508.run

**Analysis Lot:** 286366  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	62		50	
74-85-1	Ethene	3500		50	
74-82-8	Methane	1700		100	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 1100  
Date Received: 4/ 5/12  
Date Analyzed: 4/10/12 09:36

Sample Name: BW-6  
Lab Code: R1202156-007

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQUDATA\HPLC05\DATA\040912\X0007849.D\

Analysis Lot: 286801  
Instrument Name: R-HPLC-05  
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
127-17-3	Pyruvic Acid	0.50 U	0.50	
64-19-7	Acetic Acid	63	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0 U	2.0	
50-21-5	Lactic Acid	1.0 U	1.0	
79-09-4	Propionic Acid	1.0 U	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 0930  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 18:26

**Sample Name:** BW-8  
**Lab Code:** R1202156-008

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\040912\U7698.D\

**Analysis Lot:** 286620  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	18		10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	77		10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	1900	E	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	10	U	10	
79-01-6	Trichloroethene (TCE)	10	U	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	10	U	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/9/12 18:26	
Dibromofluoromethane	101	70-130	4/9/12 18:26	
Toluene-d8	99	70-130	4/9/12 18:26	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 0930  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 19:10

**Sample Name:** BW-8  
**Lab Code:** R1202156-008  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa12\Data\041012\U7743.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	70	D	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	2000	D	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	20	U	20	
79-01-6	Trichloroethene (TCE)	20	U	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	20	U	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/10/12 19:10	
Dibromofluoromethane	102	70-130	4/10/12 19:10	
Toluene-d8	100	70-130	4/10/12 19:10	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 0930  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 10:44

**Sample Name:** BW-8  
**Lab Code:** R1202156-008

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1521.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 25

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	82	25	
74-85-1	Ethene	3400 E	25	
74-82-8	Methane	4300 E	50	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 0930  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 10:55

**Sample Name:** BW-8  
**Lab Code:** R1202156-008  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1522.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	80	D	50	
74-85-1	Ethene	3400	D	50	
74-82-8	Methane	4300	D	100	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 0930  
Date Received: 4/ 5/12  
Date Analyzed: 4/9/12 23:35

Sample Name: BW-8  
Lab Code: R1202156-008

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQUDATA\HPLC05\DATA\040912\X0007830.D\

Analysis Lot: 286801  
Instrument Name: R-HPLC-05  
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
127-17-3	Pyruvic Acid	0.50 U	0.50	
64-19-7	Acetic Acid	100	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0 U	2.0	
50-21-5	Lactic Acid	1.0 U	1.0	
79-09-4	Propionic Acid	2.2	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 0900  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 19:00

**Sample Name:** BW-9  
**Lab Code:** R1202156-009

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\040912\U7699.D\

**Analysis Lot:** 286620  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	6.7		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	13		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	1200	E	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/9/12 19:00	
Dibromofluoromethane	101	70-130	4/9/12 19:00	
Toluene-d8	98	70-130	4/9/12 19:00	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 0900  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 19:43

**Sample Name:** BW-9  
**Lab Code:** R1202156-009  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa12\Data\041012\U7744.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	1700	D	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	20	U	20	
79-01-6	Trichloroethene (TCE)	20	U	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	20	U	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/10/12 19:43	
Dibromofluoromethane	102	70-130	4/10/12 19:43	
Toluene-d8	100	70-130	4/10/12 19:43	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 0900  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 11:09

**Sample Name:** BW-9  
**Lab Code:** R1202156-009

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1523.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 25

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	350	25	
74-85-1	Ethene	4100 E	25	
74-82-8	Methane	4500 E	50	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 0900  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 11:18

**Sample Name:** BW-9  
**Lab Code:** R1202156-009  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1524.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	350 D	50	
74-85-1	Ethene	4100 D	50	
74-82-8	Methane	4500 D	100	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 0900  
Date Received: 4/ 5/12  
Date Analyzed: 4/10/12 13:57

Sample Name: BW-9  
Lab Code: R1202156-009

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQUDATA\HPLC05\DATA\040912\X0007856.D\

Analysis Lot: 286801  
Instrument Name: R-HPLC-05  
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
127-17-3	Pyruvic Acid	0.50 U	0.50	
64-19-7	Acetic Acid	85	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0 U	2.0	
50-21-5	Lactic Acid	1.0 U	1.0	
79-09-4	Propionic Acid	4.2	1.0	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 4/12 1040  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 20:16

**Sample Name:** MW-8  
**Lab Code:** R1202156-010

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa12\Data\041012\U7745.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100		10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	900		10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	640		10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	10	U	10	
79-01-6	Trichloroethene (TCE)	10	U	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	10	U	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/10/12 20:16	
Dibromofluoromethane	103	70-130	4/10/12 20:16	
Toluene-d8	100	70-130	4/10/12 20:16	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1240  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 15:52

**Sample Name:** MW-9  
**Lab Code:** R1202156-011

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUADATA\msvoa12\Data\041012\U7737.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.9		2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	6.1		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	12		2.0	
156-59-2	cis-1,2-Dichloroethene	27		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/10/12 15:52	
Dibromofluoromethane	103	70-130	4/10/12 15:52	
Toluene-d8	101	70-130	4/10/12 15:52	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1240  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 11:30

**Sample Name:** MW-9  
**Lab Code:** R1202156-011

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1525.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 250

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	2000		250	
74-85-1	Ethene	1200		250	
74-82-8	Methane	16000		500	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 1240  
Date Received: 4/ 5/12  
Date Analyzed: 4/10/12 02:13

Sample Name: MW-9  
Lab Code: R1202156-011

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQUDATA\HPLC05\DATA\040912\X0007835.D\

Analysis Lot: 286801  
Instrument Name: R-HPLC-05  
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
127-17-3	Pyruvic Acid	0.50 U	0.50	
64-19-7	Acetic Acid	1.0 U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0 U	2.0	
50-21-5	Lactic Acid	1.0 U	1.0	
79-09-4	Propionic Acid	1.0 U	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1045  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 20:49

**Sample Name:** OB9-BR  
**Lab Code:** R1202156-012

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa12\Data\041012\U7746.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	1900		40	
79-01-6	Trichloroethene (TCE)	3200		40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	40	U	40	
156-59-2	cis-1,2-Dichloroethene	2500		40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/10/12 20:49	
Dibromofluoromethane	103	70-130	4/10/12 20:49	
Toluene-d8	99	70-130	4/10/12 20:49	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1045  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 13:57

**Sample Name:** OB9-BR  
**Lab Code:** R1202156-012

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1536.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	10 U	10	
74-85-1	Ethene	42	10	
74-82-8	Methane	1600 E	20	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1045  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 14:08

**Sample Name:** OB9-BR  
**Lab Code:** R1202156-012  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1537.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	20 U	20	
74-85-1	Ethene	43 D	20	
74-82-8	Methane	1700 D	40	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1045  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 03:16

**Sample Name:** OB9-BR  
**Lab Code:** R1202156-012

**Units:** mg/L  
**Basis:** NA

**Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time**

**Analytical Method:** Organic Acids  
**Data File Name:** J:\ACQUDATA\HPLC05\DATA\040912\X0007837.D\

**Analysis Lot:** 286801  
**Instrument Name:** R-HPLC-05  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result Q	MRL	Note
127-17-3	Pyruvic Acid	0.50 U	0.50	
64-19-7	Acetic Acid	6.2	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0 U	2.0	
50-21-5	Lactic Acid	1.0 U	1.0	
79-09-4	Propionic Acid	1.0 U	1.0	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1025  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 21:22

**Sample Name:** OB9-DO  
**Lab Code:** R1202156-013

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041012\U7747.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	40	U	40	
79-01-6	Trichloroethene (TCE)	40	U	40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	1900		40	
156-59-2	cis-1,2-Dichloroethene	2000		40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/10/12 21:22	
Dibromofluoromethane	104	70-130	4/10/12 21:22	
Toluene-d8	99	70-130	4/10/12 21:22	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1025  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 13:25

**Sample Name:** OB9-DO  
**Lab Code:** R1202156-013

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1533.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	20 U	20	
74-85-1	Ethene	20 U	20	
74-82-8	Methane	1200	40	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 1025  
Date Received: 4/ 5/12  
Date Analyzed: 4/10/12 04:20

Sample Name: OB9-DO  
Lab Code: R1202156-013

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQUDATA\HPLC05\DATA\040912\X0007839.D\

Analysis Lot: 286801  
Instrument Name: R-HPLC-05  
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
127-17-3	Pyruvic Acid	0.50 U	0.50	
64-19-7	Acetic Acid	1.0 U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0 U	2.0	
50-21-5	Lactic Acid	1.0 U	1.0	
79-09-4	Propionic Acid	1.0 U	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1010  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 21:55

**Sample Name:** OB9-S  
**Lab Code:** R1202156-014

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa12\Data\041012\U7748.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	270		4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	4.0	U	4.0	
79-01-6	Trichloroethene (TCE)	4.0	U	4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	4.0	U	4.0	
156-59-2	cis-1,2-Dichloroethene	4.0	U	4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/10/12 21:55	
Dibromofluoromethane	103	70-130	4/10/12 21:55	
Toluene-d8	99	70-130	4/10/12 21:55	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1010  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 13:37

**Sample Name:** OB9-S  
**Lab Code:** R1202156-014

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1534.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 250

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	690	250	
74-85-1	Ethene	250 U	250	
74-82-8	Methane	28000 E	500	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 1010  
Date Received: 4/ 5/12  
Date Analyzed: 4/11/12 13:47

Sample Name: OB9-S  
Lab Code: R1202156-014  
Run Type: Dilution

Units: µg/L  
Basis: NA

Dissolved Gases by GC/FID

Analytical Method: RSK 175  
Data File Name: star1535.run

Analysis Lot: 286925  
Instrument Name: R-GC-02  
Dilution Factor: 500

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	650 D	500	
74-85-1	Ethene	500 U	500	
74-82-8	Methane	27000 D	1000	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 1010  
Date Received: 4/ 5/12  
Date Analyzed: 4/7/12 04:45

Sample Name: OB9-S  
Lab Code: R1202156-014

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQUDATA\HPLC05\DATA\040612\X0007798.D\

Analysis Lot: 286552  
Instrument Name: R-HPLC-05  
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
127-17-3	Pyruvic Acid	0.50 U	0.50	
64-19-7	Acetic Acid	54	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0 U	2.0	
50-21-5	Lactic Acid	1.0 U	1.0	
79-09-4	Propionic Acid	19	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 4/12 1110  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 16:25

**Sample Name:** OB10-S  
**Lab Code:** R1202156-015

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041012\U7738.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	8.1		2.0	
79-01-6	Trichloroethene (TCE)	20		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/10/12 16:25	
Dibromofluoromethane	102	70-130	4/10/12 16:25	
Toluene-d8	98	70-130	4/10/12 16:25	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 4/12 1130  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 22:28

**Sample Name:** OB10-DO  
**Lab Code:** R1202156-016

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUADATA\msvoa12\Data\041012\U7749.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	19		10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	10	U	10	
79-01-6	Trichloroethene (TCE)	300		10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	740		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	21		10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/10/12 22:28	
Dibromofluoromethane	103	70-130	4/10/12 22:28	
Toluene-d8	99	70-130	4/10/12 22:28	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 4/12 1215  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 12:45

**Sample Name:** OB12-S  
**Lab Code:** R1202156-017

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9601.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	200		4.0	
79-01-6	Trichloroethene (TCE)	110		4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	4.0	U	4.0	
156-59-2	cis-1,2-Dichloroethene	4.0	U	4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/11/12 12:45	
Dibromofluoromethane	102	70-130	4/11/12 12:45	
Toluene-d8	99	70-130	4/11/12 12:45	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 4/12 1230  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 13:15

**Sample Name:** OB12-DO  
**Lab Code:** R1202156-018

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9602.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 200

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	400	U	400	
79-34-5	1,1,2,2-Tetrachloroethane	400	U	400	
79-00-5	1,1,2-Trichloroethane	400	U	400	
75-34-3	1,1-Dichloroethane (1,1-DCA)	400	U	400	
75-35-4	1,1-Dichloroethene (1,1-DCE)	400	U	400	
107-06-2	1,2-Dichloroethane	400	U	400	
78-87-5	1,2-Dichloropropane	400	U	400	
67-64-1	Acetone	2000	U	2000	
75-27-4	Bromodichloromethane	400	U	400	
75-25-2	Bromoform	400	U	400	
74-83-9	Bromomethane	400	U	400	
56-23-5	Carbon Tetrachloride	400	U	400	
108-90-7	Chlorobenzene	400	U	400	
75-00-3	Chloroethane	400	U	400	
67-66-3	Chloroform	400	U	400	
74-87-3	Chloromethane	400	U	400	
124-48-1	Dibromochloromethane	400	U	400	
75-09-2	Methylene Chloride	400	U	400	
127-18-4	Tetrachloroethene (PCE)	2500		400	
79-01-6	Trichloroethene (TCE)	37000		400	
75-69-4	Trichlorofluoromethane (CFC 11)	400	U	400	
75-01-4	Vinyl Chloride	400	U	400	
156-59-2	cis-1,2-Dichloroethene	19000		400	
10061-01-5	cis-1,3-Dichloropropene	400	U	400	
156-60-5	trans-1,2-Dichloroethene	400	U	400	
10061-02-6	trans-1,3-Dichloropropene	400	U	400	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/11/12 13:15	
Dibromofluoromethane	100	70-130	4/11/12 13:15	
Toluene-d8	99	70-130	4/11/12 13:15	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1300  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 13:45

**Sample Name:** OB15-S  
**Lab Code:** R1202156-019

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9603.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	20	U	20	
79-01-6	Trichloroethene (TCE)	20	U	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	640		20	
156-59-2	cis-1,2-Dichloroethene	1400		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/11/12 13:45	
Dibromofluoromethane	104	70-130	4/11/12 13:45	
Toluene-d8	98	70-130	4/11/12 13:45	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1300  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 14:17

**Sample Name:** OB15-S  
**Lab Code:** R1202156-019

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star1538.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 250

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	370	250	
74-85-1	Ethene	310	250	
74-82-8	Methane	21000	500	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 1300  
Date Received: 4/ 5/12  
Date Analyzed: 4/7/12 05:48

Sample Name: OB15-S  
Lab Code: R1202156-019

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQUDATA\HPLC05\DATA\040612\X0007800.D\

Analysis Lot: 286552  
Instrument Name: R-HPLC-05  
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	9.4		1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 4/12 1150  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 14:15

**Sample Name:** OB19-DO  
**Lab Code:** R1202156-020

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9604.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	800		40	
79-01-6	Trichloroethene (TCE)	3100		40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	100		40	
156-59-2	cis-1,2-Dichloroethene	1500		40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	66		40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/11/12 14:15	
Dibromofluoromethane	101	70-130	4/11/12 14:15	
Toluene-d8	99	70-130	4/11/12 14:15	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 0950  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 16:58

**Sample Name:** STR-3  
**Lab Code:** R1202156-021

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUADATA\msvoa12\Data\041012\U7739.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/10/12 16:58	
Dibromofluoromethane	102	70-130	4/10/12 16:58	
Toluene-d8	96	70-130	4/10/12 16:58	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 0950  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 11:53

**Sample Name:** STR-3  
**Lab Code:** R1202156-021

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1527.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	
74-85-1	Ethene	1.0 U	1.0	
74-82-8	Methane	7.7	2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: 4/ 3/12 0950  
Date Received: 4/ 5/12  
Date Analyzed: 4/7/12 06:52

Sample Name: STR-3  
Lab Code: R1202156-021

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQUDATA\HPLC05\DATA\040612\X0007802.D\

Analysis Lot: 286552  
Instrument Name: R-HPLC-05  
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
127-17-3	Pyruvic Acid	0.50 U	0.50	
64-19-7	Acetic Acid	1.0 U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0 U	2.0	
50-21-5	Lactic Acid	1.0 U	1.0	
79-09-4	Propionic Acid	1.0 U	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1205  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 14:45

**Sample Name:** Unnamed Stream  
**Lab Code:** R1202156-022

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9605.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	1200		20	
79-01-6	Trichloroethene (TCE)	730		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	180		20	
156-59-2	cis-1,2-Dichloroethene	2000		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/11/12 14:45	
Dibromofluoromethane	104	70-130	4/11/12 14:45	
Toluene-d8	97	70-130	4/11/12 14:45	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1205  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 12:46

**Sample Name:** Unnamed Stream  
**Lab Code:** R1202156-022

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1531.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 2.5

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	26	2.5	
74-85-1	Ethene	49	2.5	
74-82-8	Methane	340 E	5.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1205  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 12:56

**Sample Name:** Unnamed Stream  
**Lab Code:** R1202156-022  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1532.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	26	D	5.0	
74-85-1	Ethene	50	D	5.0	
74-82-8	Methane	350	D	10	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 3/12 1205  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/7/12 07:55

**Sample Name:** Unnamed Stream  
**Lab Code:** R1202156-022

**Units:** mg/L  
**Basis:** NA

**Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time**

**Analytical Method:** Organic Acids  
**Data File Name:** J:\ACQUDATA\HPLC05\DATA\040612\X0007804.D\

**Analysis Lot:** 286552  
**Instrument Name:** R-HPLC-05  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 4/12  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 14:13

**Sample Name:** Trip Blank 3  
**Lab Code:** R1202156-023

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041012\U7734.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	4/10/12 14:13	
Dibromofluoromethane	101	70-130	4/10/12 14:13	
Toluene-d8	95	70-130	4/10/12 14:13	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/ 4/12 1400  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 14:46

**Sample Name:** EB-3  
**Lab Code:** R1202156-024

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUADATA\msvoa12\Data\041012\U7735.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/10/12 14:46	
Dibromofluoromethane	102	70-130	4/10/12 14:46	
Toluene-d8	98	70-130	4/10/12 14:46	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/9/12 14:02

**Sample Name:** Method Blank  
**Lab Code:** RQ1203675-05

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\040912\U7690.D\

**Analysis Lot:** 286620  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/9/12 14:02	
Dibromofluoromethane	100	70-130	4/9/12 14:02	
Toluene-d8	98	70-130	4/9/12 14:02	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/10/12 13:40

**Sample Name:** Method Blank  
**Lab Code:** RQ1203418-05

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041012U7733.D\

**Analysis Lot:** 286776  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/10/12 13:40	
Dibromofluoromethane	102	70-130	4/10/12 13:40	
Toluene-d8	98	70-130	4/10/12 13:40	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/11/12 12:16

**Sample Name:** Method Blank  
**Lab Code:** RQ1203620-01

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9600.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/11/12 12:16	
Dibromofluoromethane	101	70-130	4/11/12 12:16	
Toluene-d8	98	70-130	4/11/12 12:16	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/6/12 10:25

**Sample Name:** Method Blank  
**Lab Code:** RQ1203293-01

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1498.run

**Analysis Lot:** 286366  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	
74-85-1	Ethene	1.0	U	1.0	
74-82-8	Methane	2.0	U	2.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/11/12 10:18

**Sample Name:** Method Blank  
**Lab Code:** RQ1203460-01

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star1519.run

**Analysis Lot:** 286925  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	
74-85-1	Ethene	1.0	U	1.0	
74-82-8	Methane	2.0	U	2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: NA  
Date Received: NA  
Date Analyzed: 4/6/12 11:53

Sample Name: Method Blank  
Lab Code: RQ1203347-01

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQUDATA\HPLC05\DATA\040612\X0007766.D\

Analysis Lot: 286552  
Instrument Name: R-HPLC-05  
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
127-17-3	Pyruvic Acid	0.50	U	0.50	
64-19-7	Acetic Acid	1.0	U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0	U	2.0	
50-21-5	Lactic Acid	1.0	U	1.0	
79-09-4	Propionic Acid	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Collected: NA  
Date Received: NA  
Date Analyzed: 4/10/12 08:01

Sample Name: Method Blank  
Lab Code: RQ1203426-01

Units: mg/L  
Basis: NA

Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids  
Data File Name: J:\ACQUDATA\HPLC05\DATA\040912\X0007846.D\

Analysis Lot: 286801  
Instrument Name: R-HPLC-05  
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
127-17-3	Pyruvic Acid	0.50 U	0.50	
64-19-7	Acetic Acid	1.0 U	1.0	
107-92-6	Butanoic Acid (Butyric Acid)	2.0 U	2.0	
50-21-5	Lactic Acid	1.0 U	1.0	
79-09-4	Propionic Acid	1.0 U	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/3/12  
**Date Received:** 4/5/12  
**Date Analyzed:** 4/11/12

**Matrix Spike Summary  
Dissolved Gases by GC/FID**

**Sample Name:** AP13-DO  
**Lab Code:** R1202156-001

**Units:** µg/L  
**Basis:** NA

**Analytical Method:** RSK 175

Analyte Name	Sample Result	AP13-DOMS Matrix Spike RQ1203460-03			AP13-DODMS Duplicate Matrix Spike RQ1203460-04			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Ethane	ND	32.8	52.1	63	32.9	52.1	63	57 - 133	<1	20
Ethene	3.3	33.6	48.6	62	34.3	48.6	64	58 - 135	2	20
Methane	2.3	34.2	52.4	61	34.5	52.4	61	47 - 146	<1	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Collected:** 4/3/12  
**Date Received:** 4/5/12  
**Date Analyzed:** 4/10/12

**Matrix Spike Summary**

**Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time**

**Sample Name:** OB9-DO  
**Lab Code:** R1202156-013

**Units:** mg/L  
**Basis:** NA

**Analytical Method:** Organic Acids

Analyte Name	Sample Result	OB9-DOMS Matrix Spike RQ1203426-04			OB9-DODMS Duplicate Matrix Spike RQ1203426-05			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Pyruvic Acid	ND	0.930	1.00	93	0.940	1.00	94	25 - 152	1	30
Acetic Acid	ND	9.58	10.3	93	9.64	10.3	94	13 - 167	<1	30
Butanoic Acid (Butyric Acid)	ND	9.40	10.1	93	9.56	10.1	94	49 - 145	2	30
Lactic Acid	ND	8.93	10.0	89	8.98	10.0	89	27 - 127	<1	30
Propionic Acid	ND	9.96	10.1	99	10.0	10.1	100	68 - 133	<1	30

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Results flagged with a pound (#) indicate the control criteria is not applicable.

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Analyzed:** 4/ 9/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 286620

Analyte Name	Lab Control Sample RQ1203675-03			Duplicate Lab Control Sample RQ1203675-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	17.4	20.0	87	18.1	20.0	91	70 - 130	4	20
1,1,2,2-Tetrachloroethane	21.0	20.0	105	19.6	20.0	98	70 - 130	7	20
1,1,2-Trichloroethane	19.6	20.0	98	19.3	20.0	96	70 - 130	1	20
1,1-Dichloroethane (1,1-DCA)	17.8	20.0	89	18.4	20.0	92	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	20.5	20.0	102	20.9	20.0	104	70 - 130	2	20
1,2-Dichloroethane	16.8	20.0	84	16.8	20.0	84	70 - 130	<1	20
1,2-Dichloropropane	17.7	20.0	89	18.2	20.0	91	70 - 130	3	20
Acetone	16.4	20.0	82	16.2	20.0	81	40 - 160	1	20
Bromodichloromethane	18.9	20.0	94	19.2	20.0	96	70 - 130	2	20
Bromoform	22.9	20.0	115	21.1	20.0	105	70 - 130	9	20
Bromomethane	16.6	20.0	83	15.9	20.0	79	40 - 160	5	20
Carbon Tetrachloride	19.0	20.0	95	19.8	20.0	99	70 - 130	4	20
Chlorobenzene	19.8	20.0	99	19.9	20.0	99	70 - 130	<1	20
Chloroethane	19.5	20.0	98	20.5	20.0	102	70 - 130	5	20
Chloroform	18.3	20.0	92	18.2	20.0	91	70 - 130	<1	20
Chloromethane	21.6	20.0	108	22.6	20.0	113	40 - 160	5	20
Dibromochloromethane	22.2	20.0	111	21.0	20.0	105	70 - 130	5	20
Methylene Chloride	18.4	20.0	92	18.5	20.0	93	70 - 130	<1	20
Tetrachloroethene (PCE)	20.6	20.0	103	20.9	20.0	104	70 - 130	1	20
Trichloroethene (TCE)	19.0	20.0	95	19.5	20.0	97	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	18.5	20.0	93	18.9	20.0	95	70 - 130	2	20
Vinyl Chloride	18.9	20.0	94	19.8	20.0	99	70 - 130	5	20
cis-1,2-Dichloroethene	18.9	20.0	95	19.4	20.0	97	70 - 130	3	20
cis-1,3-Dichloropropene	17.9	20.0	89	17.7	20.0	88	70 - 130	1	20
trans-1,2-Dichloroethene	18.6	20.0	93	19.4	20.0	97	70 - 130	4	20
trans-1,3-Dichloropropene	17.8	20.0	89	17.3	20.0	87	70 - 130	3	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Analyzed:** 4/10/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 286776

Analyte Name	Lab Control Sample RQ1203418-03			Duplicate Lab Control Sample RQ1203418-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	16.4	20.0	82	15.2	20.0	76	70 - 130	8	20
1,1,2,2-Tetrachloroethane	22.6	20.0	113	22.0	20.0	110	70 - 130	3	20
1,1,2-Trichloroethane	20.3	20.0	101	19.7	20.0	99	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	18.2	20.0	91	16.5	20.0	83	70 - 130	10	20
1,1-Dichloroethene (1,1-DCE)	20.9	20.0	105	18.8	20.0	94	70 - 130	11	20
1,2-Dichloroethane	16.4	20.0	82	15.1	20.0	76	70 - 130	8	20
1,2-Dichloropropane	17.8	20.0	89	16.4	20.0	82	70 - 130	8	20
Acetone	16.8	20.0	84	14.8	20.0	74	40 - 160	13	20
Bromodichloromethane	17.7	20.0	88	16.6	20.0	83	70 - 130	6	20
Bromoform	19.2	20.0	96	19.0	20.0	95	70 - 130	<1	20
Bromomethane	17.5	20.0	87	15.3	20.0	76	40 - 160	13	20
Carbon Tetrachloride	15.3	20.0	76	14.1	20.0	70	70 - 130	8	20
Chlorobenzene	20.1	20.0	100	18.0	20.0	90	70 - 130	11	20
Chloroethane	21.6	20.0	108	18.8	20.0	94	70 - 130	14	20
Chloroform	18.4	20.0	92	17.0	20.0	85	70 - 130	8	20
Chloromethane	24.2	20.0	121	20.9	20.0	105	40 - 160	15	20
Dibromochloromethane	20.2	20.0	101	18.5	20.0	93	70 - 130	9	20
Methylene Chloride	19.6	20.0	98	17.6	20.0	88	70 - 130	11	20
Tetrachloroethene (PCE)	19.1	20.0	96	17.9	20.0	90	70 - 130	6	20
Trichloroethene (TCE)	18.7	20.0	93	16.9	20.0	85	70 - 130	10	20
Trichlorofluoromethane (CFC 11)	19.5	20.0	98	17.6	20.0	88	70 - 130	10	20
Vinyl Chloride	19.9	20.0	100	18.1	20.0	90	70 - 130	10	20
cis-1,2-Dichloroethene	19.8	20.0	99	17.9	20.0	90	70 - 130	10	20
cis-1,3-Dichloropropene	16.3	20.0	81	14.7	20.0	74	70 - 130	10	20
trans-1,2-Dichloroethene	19.2	20.0	96	17.4	20.0	87	70 - 130	10	20
trans-1,3-Dichloropropene	14.7	20.0	73	13.3	20.0	67 *	70 - 130	10	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Analyzed:** 4/11/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 286967

Analyte Name	Lab Control Sample RQ1203620-02			Duplicate Lab Control Sample RQ1203620-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	18.2	20.0	91	16.9	20.0	84	70 - 130	7	20
1,1,2,2-Tetrachloroethane	18.1	20.0	90	17.9	20.0	90	70 - 130	<1	20
1,1,2-Trichloroethane	18.5	20.0	92	18.9	20.0	94	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	18.7	20.0	93	17.5	20.0	87	70 - 130	7	20
1,1-Dichloroethene (1,1-DCE)	19.2	20.0	96	18.2	20.0	91	70 - 130	5	20
1,2-Dichloroethane	18.8	20.0	94	18.5	20.0	92	70 - 130	2	20
1,2-Dichloropropane	18.1	20.0	91	17.9	20.0	89	70 - 130	1	20
Acetone	19.3	20.0	97	22.1	20.0	110	40 - 160	13	20
Bromodichloromethane	17.3	20.0	86	17.2	20.0	86	70 - 130	<1	20
Bromoform	17.4	20.0	87	17.6	20.0	88	70 - 130	1	20
Bromomethane	19.4	20.0	97	19.3	20.0	96	40 - 160	<1	20
Carbon Tetrachloride	18.8	20.0	94	16.3	20.0	82	70 - 130	14	20
Chlorobenzene	18.3	20.0	91	17.3	20.0	86	70 - 130	6	20
Chloroethane	19.6	20.0	98	18.3	20.0	91	70 - 130	7	20
Chloroform	18.7	20.0	93	17.7	20.0	89	70 - 130	5	20
Chloromethane	23.4	20.0	117	22.1	20.0	111	40 - 160	6	20
Dibromochloromethane	18.9	20.0	94	18.9	20.0	94	70 - 130	<1	20
Methylene Chloride	18.4	20.0	92	17.8	20.0	89	70 - 130	3	20
Tetrachloroethene (PCE)	18.5	20.0	93	16.7	20.0	83	70 - 130	11	20
Trichloroethene (TCE)	17.4	20.0	87	16.8	20.0	84	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	19.9	20.0	99	18.3	20.0	91	70 - 130	8	20
Vinyl Chloride	21.2	20.0	106	19.9	20.0	99	70 - 130	6	20
cis-1,2-Dichloroethene	17.9	20.0	89	16.7	20.0	84	70 - 130	7	20
cis-1,3-Dichloropropene	17.2	20.0	86	17.0	20.0	85	70 - 130	<1	20
trans-1,2-Dichloroethene	19.0	20.0	95	17.6	20.0	88	70 - 130	8	20
trans-1,3-Dichloropropene	17.0	20.0	85	16.8	20.0	84	70 - 130	1	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Analyzed:** 4/6/12

**Lab Control Sample Summary  
 Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 286366

Analyte Name	Lab Control Sample RQ1203293-02			Duplicate Lab Control Sample RQ1203293-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Ethane	33.5	26.0	129	31.4	26.0	121	56 - 148	6	20
Ethene	29.5	24.3	121	27.9	24.3	115	58 - 155	6	20
Methane	33.5	26.2	128	31.5	26.2	120	55 - 150	6	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Analyzed:** 4/11/12

**Lab Control Sample Summary**  
**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 286925

**Lab Control Sample**

RQ1203460-02

<b>Analyte Name</b>	<b>Result</b>	<b>Spike Amount</b>	<b>% Rec</b>	<b>% Rec Limits</b>
Ethane	29.9	26.0	115	56 - 148
Ethene	26.7	24.3	110	58 - 155
Methane	30.0	26.2	114	55 - 150

Results flagged with an asterisk (\*) indicate values outside control criteria.

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143276-02000000  
**Sample Matrix:** Water

**Service Request:** R1202156  
**Date Analyzed:** 4/6/12

**Lab Control Sample Summary**  
**Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time**

**Analytical Method:** Organic Acids

**Units:** mg/L

**Basis:** NA

**Analysis Lot:** 286552

Analyte Name	Lab Control Sample RQ1203347-02			Duplicate Lab Control Sample RQ1203347-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Pyruvic Acid	1.10	1.00	110	1.08	1.00	108	70 - 130	2	30
Acetic Acid	10.7	10.3	105	10.4	10.3	102	70 - 135	3	30
Butanoic Acid (Butyric Acid)	9.93	10.1	98	9.67	10.1	95	78 - 113	3	30
Lactic Acid	10.1	10.0	101	9.93	10.0	99	61 - 109	2	30
Propionic Acid	9.91	10.1	99	9.93	10.1	99	80 - 125	<1	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Analyzed: 4/10/12

Lab Control Sample Summary  
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids

Units: mg/L

Basis: NA

Analysis Lot: 286801

Analyte Name	Lab Control Sample RQ1203426-02			Duplicate Lab Control Sample RQ1203426-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Pyruvic Acid	1.13	1.00	113	1.14	1.00	114	70 - 130	<1	30
Acetic Acid	10.2	10.3	99	10.4	10.3	101	70 - 135	2	30
Butanoic Acid (Butyric Acid)	11.0	10.1	109	11.3	10.1	112	78 - 113	3	30
Lactic Acid	10.5	10.0	105	10.6	10.0	106	61 - 109	1	30
Propionic Acid	9.85	10.1	98	10.1	10.1	100	80 - 125	2	30

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143276-02000000  
Sample Matrix: Water

Service Request: R1202156  
Date Analyzed: 4/10/12

Lab Control Sample Summary  
Organic Acids in Aqueous Matrices by High Performance Liquid Chromatography (HPLC) 28 Day Hold Time

Analytical Method: Organic Acids

Units: mg/L

Basis: NA

Analysis Lot: 286801

Lab Control Sample  
RQ1203426-06

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Pyruvic Acid	0.120	0.100	119	70 - 130
Acetic Acid	0.970	0.982	99	70 - 135
Butanoic Acid (Butyric Acid)	1.78	1.02	175 *	78 - 113
Lactic Acid	0.990	1.01	98	61 - 109
Propionic Acid	1.05	0.998	105	80 - 125

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Project Name <b>Varian Beverly</b>		Project Number <b>143276-02000000</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>Raymond Cadorette</b>		Report CC			
Company/Address <b>Shaw Environmental, Inc.</b>					
<b>100 Technology Center Drive</b>					
<b>Stoughton, MA 02072</b>					
Phone # <b>617-589-6102</b>		E-mail <b>Raymond.Cadorette@Shawgrp.com</b>			
Sampler's Signature <i>Chris M...</i>		Sampler's Printed Name <b>Astin Magnant</b>			
FOR OFFICE USE ONLY		SAMPLING DATE		MATRIX	
CLIENT SAMPLE ID	LAB ID	DATE	TIME		
AP13-DO		4-3-12	13:55	GW	
AP23-DO		4-3-12	14:10		
AP24-DO		4-3-12	13:30		
AP25-DO		4-3-12	13:15		
BW-4		4-3-12	11:40		
BW-5		4-3-12	11:15		
BW-6		4-3-12	11:00		
BW-8		4-3-12	9:30		
BW-9		4-3-12	9:00		
MW-8		4-4-12	10:40		

PRESERVATIVE	NUMBER OF CONTAINERS	GC/MS SVOCs <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> CIP VOC List		METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	METHYLENE EXHAUST EXHAUST (List in comments below)	METHANOLIC ACIDS	PRESERVATIVE KEY 0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO4 8. Other	REMARKS/ ALTERNATE DESCRIPTION
		GC/MS VOAs <input type="checkbox"/> 8021 <input type="checkbox"/> 601/602							

TURNAROUND REQUIREMENTS	REPORT REQUIREMENTS	INVOICE INFORMATION
FO #:	I. Results Only	BILL TO:
	II. Results + QC Summaries (LCS, DUP, MSMSD as required)	<b>Shaw Environmental</b>
	III. Results + QC and Calibration Summaries	
	IV. Data Validation Report with Raw Data	

See QAPP

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY
Signature: <i>Chris M...</i>	Signature: <i>Astin Magnant</i>
Printed Name: <b>Astin Magnant</b>	Printed Name: <b>Astin Magnant</b>
Firm: <b>Shaw</b>	Firm: <b>Shaw</b>
Date/Time: <b>4-4-12 1502</b>	Date/Time: <b>4-4-12 0900</b>

SPECIAL INSTRUCTIONS/COMMENTS  
**Metals = Field filtered**  
 Site specific VOC List  
 Massachusetts CAM analyses report and QA/QC.  
 Email GISKey formatted EDD and PDF of report to:  
 Catherine.Mainville@Shawgrp.com.

FO #:

BILL TO:  
**Shaw Environmental**

Edata Yes

RELINQUISHED BY

Signature

Printed Name

Firm

Date/Time

RECEIVED BY

Signature

Printed Name

Firm

Date/Time

REQUESTED REPORT DATE

RECEIVED BY

Signature

Printed Name

Firm

Date/Time

**R1202156**  
Shaw Environmental & Infrastructure, Inc.  
Varian Beverly





# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 650, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 2 OF 3

Project Name <b>Varian Beverly</b>		Project Number <b>143276-02000000</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>Raymond Cadorette</b>		Report CC			
Company/Address <b>Shaw Environmental, Inc.</b>					
100 Technology Center Drive					
Stoughton, MA 02072					
Phone #		E-mail			
617-589-6102		Raymond.Cadorette@shawgrp.com			
Sampler's Signature <i>Chad Maged</i>		Sampler's Printed Name <b>Ashia Maged</b>			
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	TIME	MATRIX	NUMBER OF CONTAINERS
MW-9		4-3-12	12:40	GW	7
OB9-BR		4-3-12	10:45		7
OB9-DO		4-3-12	10:25		7
OB9-S		4-3-12	10:10		7
OB10-S		4-4-12	11:10		3
OB10-DO		4-4-12	11:30		3
OB12-S		4-4-12	12:15		3
OB12-DO		4-4-12	12:30		3
OB15-S		4-3-12	13:00		7
OB19-DO		4-4-12	11:50		3

PRESERVATIVE		PRELIMINARY ANALYSIS		REMARKS/ALTERNATE DESCRIPTION	
<input type="checkbox"/> NONE <input type="checkbox"/> HCL <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> Zn. Acetate <input type="checkbox"/> MeOH <input type="checkbox"/> NaHSO4 <input type="checkbox"/> Other _____ <b>Phosphoric Acid</b>		<input type="checkbox"/> METALS, TOTAL (list in comments below) <input type="checkbox"/> METALS, DISSOLVED (list in comments below) <input type="checkbox"/> METALS, ETHANE/ETHANE <input type="checkbox"/> METHANOLIC ACIDS		Preservative Key 0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO4 8. Other _____ <b>Phosphoric Acid</b>	

SPECIAL INSTRUCTIONS/COMMENTS <b>Metals = Field Filtered Site Specific VOC List</b> Massachusetts CAM analyses reporting and QA/QC. Email Catherine.Mainville@shawgrp.com, GISKey formatted EDD and PDF of report.		TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day ___ 2 day ___ 3 day ___ 4 day ___ 5 day ___ <input checked="" type="checkbox"/> Standard		REPORT REQUIREMENTS I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data	
<input type="checkbox"/> See QAPP <input type="checkbox"/> STATE WHERE SAMPLES WERE COLLECTED:		REQUESTED REPORT DATE		PO #: BILL TO: <b>Shaw Environmental</b>	

RELINQUISHED BY Signature: <i>Chad Maged</i> Printed Name: <b>Chad Maged</b> Firm: <b>Shaw</b> Date/Time: <b>4-4-12 1501</b>	RECEIVED BY Signature: <i>Amy Hentschke</i> Printed Name: <b>Amy Hentschke</b> Firm: <b>Shaw</b> Date/Time: <b>4/5/12 0900</b>
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### Cooler Receipt and Preservation Check Form

Project/Client Shaw - Varian Beverly Folder Number R12-2156

Cooler received on 4/5/12 by: AHL COURIER: ALS  UPS  FEDEX  VELOCITY  CLIENT

1. Were custody seals on outside of cooler?  YES  NO
2. Were custody papers properly filled out (ink, signed, etc.)?  YES  NO
3. Did all bottles arrive in good condition (unbroken)?  YES  NO
4. Did VOA vials, Alkalinity, or Sulfide have significant\* air bubbles? YES  NO  N/A
5. Were Ice or Ice packs present?  YES  NO
6. Where did the bottles originate?  ALS/ROO,  CLIENT
7. Temperature of cooler(s) upon receipt: 8.9°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below  No\* No No No No

Date/Time Temperatures Taken: 4/5/12 0912

Thermometer ID: IR GUN#3  IR GUN#4 Reading From:  Temp Blank /  Sample Bottle

If out of Temperature, note packing/ice condition & Client Approval to Run Samples:

All Samples held in storage location R-002 by AHL on 4/5/12 at 0919  
 5035 samples placed in storage location \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_

PC Secondary Review: MFP 4/5/12

Cooler Breakdown: Date: 4/5/12 Time: 1420 by: AHL

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)?  YES  NO
2. Did all bottle labels and tags agree with custody papers?  YES  NO
3. Were correct containers used for the tests indicated?  YES  NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated  N/A

Explain any discrepancies: \_\_\_\_\_

pH	Reagent	YES NO		Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
		YES	NO						
≥12	NaOH								
≤2	HNO <sub>3</sub>								
≤2	H <sub>2</sub> SO <sub>4</sub>								
<4	NaHSO <sub>4</sub>								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-			H <sub>3</sub> PO <sub>4</sub> -WC1031046 exp 5/16			
	HCl	*	*	<u>4111060</u>	<u>4/12</u>				

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: \_\_\_\_\_

Bottle lot numbers: 1-315-002, 022012-1H,

Other Comments:

\* 2 layers of samples stacked in cooler w/ 1 small layer of ice. Not enough ice for number of samples. Temperature of sample bottles also checked & lowest temp was 8.1°C.

PC Secondary Review: MFP 4/18/12  
 H:\SMODOCS\Cooler Receipt 5.doc

\*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter





April 18, 2012

Service Request No: R1202157

Mr. Ray Cadorette  
Shaw Environmental & Infrastructure, Inc.  
100 Technology Center  
Stoughton, MA 02072

**Laboratory Results for: Varian Beverly/143267-05000000**

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on April 5, 2012. For your reference, these analyses have been assigned our service request number **R1202157**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

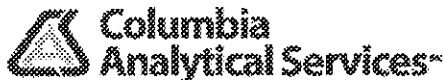
Please contact me if you have any questions. My extension is 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc. dba ALS Environmental**

Michael Perry  
Laboratory Manager

Page 1 of 88



ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623

PHONE 585-288-5380 | FAX 585-288-8475

Columbia Analytical Services, Inc.

Part of the ALS Group A Campbell Brothers Limited Company

**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** Shaw Environmental, Inc  
**Project:** Varian Beverly  
**Sample Matrix:** Water

**Service Request No.:** R1202157  
**Project Number:** 143267-05000000  
**Date Received:** 4/05/12

**CASE NARRATIVE**

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II, deliverables with Massachusetts CAM analyses reporting. When appropriate to the method, method blank results have been reported with each analytical test.

**Sample Receipt**

Water samples were collected on 4/02/12 - 4/04/12 and received at CAS in good condition at a cooler temperature of 7.3 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and CAS Job #.

**Volatile Organics**

Fifty-three water samples were analyzed for a site list or the MASS CAM list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples BR-5\_Zone 3, CL9-BR\_Zone 1, CL9-BR\_Zone 3BW-9, BR-6\_Zone 2, and BR-S\_Zone 1 were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial and continuing calibrations were compliant.

All Surrogate Standard recoveries were within QC limits.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

All samples were analyzed within the required holding time of 14 days.

No other analytical or QC problems were encountered with these analyses.



## MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc.

Project #: 143267-05000000

Project Location: Varian Beverly

RTN:

**This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):**  
R1202157 - 001 - 053

Matrices:  Groundwater  Soil/Sediment  Drinking Water  Air  Other: \_\_\_\_\_

**CAM Protocol** (check all that apply below):

8260 VOC CAM II A <input checked="" type="checkbox"/>	7470/7471 Hg CAM III B <input type="checkbox"/>	MassDEP VPH CAM IV A <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>
6010 Metals CAM III A <input type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	8082 PCB CAM V A <input type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6850 Perchlorate CAM VIII B <input type="checkbox"/>	Other: _____

**Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes <input type="checkbox"/> No
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes <input type="checkbox"/> No
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes <input type="checkbox"/> No
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes <input type="checkbox"/> No
<b>E</b>	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes <input type="checkbox"/> No

**Responses to Questions G, H and I below are required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes <input type="checkbox"/> No <sup>1</sup>
----------	-----------------------------------------------------------------------------------------------------------	------------------------------------------------

**Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	X Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes X No <sup>1</sup>

<sup>1</sup>All negative responses must be addressed in an attached laboratory narrative.

*I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.*

Signature: Michael K. Perry

Position: Laboratory Manager

Printed Name: Michael K. Perry

Date: 4/18/12 00003

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R1202157

<u>Lab ID</u>	<u>Client ID</u>
R1202157-001	TB-1
R1202157-002	EB-1
R1202157-003	MW-2R (9.5')
R1202157-004	MW-4R (35.5')
R1202157-005	MW-3R (30.2')
R1202157-006	MW-5R (17.25')
R1202157-007	OB-17-BR (98')
R1202157-008	OB-17-DO (41.24')
R1202157-009	CL-9-DO (32.8')
R1202157-010	OB-8-S (12')
R1202157-011	OB8-DO (77')
R1202157-012	OB-5-S (25')
R1202157-013	OB-5-DO (81.3')
R1202157-014	OB-5-BR (104')
R1202157-015	OB4-BR (88')
R1202157-016	OB4-DO (67')
R1202157-017	OB4-S (23.5')
R1202157-018	CL2-BR (41.5')
R1202157-019	OB6-BR (89')
R1202157-020	OB6-DO (65.6')
R1202157-021	B-3 (12.5')
R1202157-022	MW-9A (13')
R1202157-023	EB-2
R1202157-024	MW-34 (63')
R1202157-025	CL-4-DO (27.3')
R1202157-026	CL-4-BR (54.5')
R1202157-027	OB42-S (13.5')
R1202157-028	OB43-S (15')
R1202157-029	CL6-BR (68')
R1202157-030	CL6-DO (41')
R1202157-031	BR-5_Zone 2
R1202157-032	BR-5_Zone 3
R1202157-033	BB-2
R1202157-034	BR1_Zone 1
R1202157-035	BR1_Zone 2
R1202157-036	BR1_Zone 3
R1202157-037	CL9-BR_Zone 1
R1202157-038	CL9-BR_Zone 2
R1202157-039	CL9-BR_Zone 3
R1202157-040	Trip Blank-2
R1202157-041	BR-3_Zone 1
R1202157-042	BR-3_Zone 2
R1202157-043	BR-3_Zone 3
R1202157-044	BR-6_Zone 1

<u>Lab ID</u>	<u>Client ID</u>
R1202157-045	BR-6_Zone 2
R1202157-046	BR-6_Zone 3
R1202157-047	CL8-BR_Zone 1
R1202157-048	CL8-BR_Zone 2
R1202157-049	CL8-BR_Zone 3
R1202157-050	BR-7_Zone 1
R1202157-051	BR-7_Zone 2
R1202157-052	BR-7_Zone 3
R1202157-053	BR-S_Zone 1

## REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
- H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.



### **CAS/Rochester Lab ID # for Massachusetts Certification**

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

*The Commonwealth of Massachusetts*



*Department of Environmental Protection*

*Division of Environmental Analysis  
Senator William X. Wall Experiment Station*

*certifies*

M-NY032

COLUMBIA ANALYTICAL SERVICES  
1565 JEFFERSON RD  
BUILDING 300, SUITE 360  
ROCHESTER, NY 14623-0000

*Laboratory Director:* Michael K. Perry

*for the analysis of* NON POTABLE WATER (CHEMISTRY)

*pursuant to 310 CMR 42.00*

*This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.*

*This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.*

*Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.*

*Oscar C. Jacobo*

*Director, Division of Environmental Analysis*

*Issued:* 01 JUL 2011

*Expires:* 30 JUN 2012

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)	Effective Date	25 AUG 2011	Expiration Date	30 JUN 2012
<u>Analytes</u>			<u>Methods</u>	
ALUMINUM			EPA 200.7	
ANTIMONY			EPA 200.7	
ANTIMONY			EPA 200.8	
ARSENIC			EPA 200.7	
ARSENIC			EPA 200.8	
BERYLLIUM			EPA 200.7	
BERYLLIUM			EPA 200.8	
CADMIUM			EPA 200.7	
CADMIUM			EPA 200.8	
CHROMIUM			EPA 200.7	
CHROMIUM			EPA 200.8	
COBALT			EPA 200.7	
COBALT			EPA 200.8	
COPPER			EPA 200.7	
COPPER			EPA 200.8	
IRON			EPA 200.7	
LEAD			EPA 200.7	
LEAD			EPA 200.8	
MANGANESE			EPA 200.7	
MANGANESE			EPA 200.8	
MERCURY			EPA 245.1	
MOLYBDENUM			EPA 200.7	
MOLYBDENUM			EPA 200.8	
NICKEL			EPA 200.7	
NICKEL			EPA 200.8	
SELENIUM			EPA 200.7	
SELENIUM			EPA 200.8	
SILVER			EPA 200.7	
SILVER			EPA 200.8	
THALLIUM			EPA 200.7	
THALLIUM			EPA 200.8	
VANADIUM			EPA 200.7	
VANADIUM			EPA 200.8	
ZINC			EPA 200.7	
ZINC			EPA 200.8	
PH			SM 4500-H-B	
SPECIFIC CONDUCTIVITY			EPA 120.1	
TOTAL DISSOLVED SOLIDS			SM 2540C	
HARDNESS (CaCO3), TOTAL			SM 2340C	
CALCIUM			EPA 200.7	
MAGNESIUM			EPA 200.7	
SODIUM			EPA 200.7	
POTASSIUM			EPA 200.7	

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)	Effective Date	25 AUG 2011	Expiration Date	30 JUN 2012
<u>Analytes</u>			<u>Methods</u>	
ALKALINITY, TOTAL			SM 2320B	
CHLORIDE			SM 4500-CL-E	
CHLORIDE			EPA 300.0	
FLUORIDE			EPA 300.0	
SULFATE			EPA 300.0	
AMMONIA-N			EPA 350.1	
NITRATE-N			EPA 300.0	
NITRATE-N			EPA 353.2	
KJELDAHL-N			EPA 351.2	
ORTHOPHOSPHATE			EPA 365.1	
PHOSPHORUS, TOTAL			EPA 365.1	
CHEMICAL OXYGEN DEMAND			EPA 410.4	
BIOCHEMICAL OXYGEN DEMAND			SM 5210B	
TOTAL ORGANIC CARBON			SM 5310C	
CYANIDE, TOTAL			EPA 335.4	
NON-FILTERABLE RESIDUE			SM 2540D	
OIL AND GREASE			EPA 1664	
PHENOLICS, TOTAL			EPA 420.4	
VOLATILE HALOCARBONS			EPA 601	
VOLATILE HALOCARBONS			EPA 624	
VOLATILE AROMATICS			EPA 602	
VOLATILE AROMATICS			EPA 624	
SVOC-ACID EXTRACTABLES			EPA 625	
SVOC-BASE/NEUTRAL EXTRACTABLES			EPA 625	
POLYCHLORINATED BIPHENYLS (WATEF			EPA 608	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1430  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/6/12 18:37

**Sample Name:** TB-1  
**Lab Code:** R1202157-001

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040612\D9456.D\

**Analysis Lot:** 286400  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	70-130	4/6/12 18:37	
Dibromofluoromethane	106	70-130	4/6/12 18:37	
Toluene-d8	101	70-130	4/6/12 18:37	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 0830  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/6/12 19:07

**Sample Name:** EB-1  
**Lab Code:** R1202157-002

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040612\D9457.D\

**Analysis Lot:** 286400  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	4/6/12 19:07	
Dibromofluoromethane	106	70-130	4/6/12 19:07	
Toluene-d8	99	70-130	4/6/12 19:07	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1000  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/6/12 19:37

**Sample Name:** MW-2R (9.5')  
**Lab Code:** R1202157-003

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040612\D9458.D\

**Analysis Lot:** 286400  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	70-130	4/6/12 19:37	
Dibromofluoromethane	109	70-130	4/6/12 19:37	
Toluene-d8	100	70-130	4/6/12 19:37	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 0930  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/6/12 20:07

**Sample Name:** MW-4R (35.5')  
**Lab Code:** R1202157-004

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa10\data\040612\D9459.D\

**Analysis Lot:** 286400  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	66		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	8.1		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/6/12 20:07	
Dibromofluoromethane	105	70-130	4/6/12 20:07	
Toluene-d8	100	70-130	4/6/12 20:07	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1030  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/6/12 20:37

**Sample Name:** MW-3R (30.2')  
**Lab Code:** R1202157-005

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040612\D9460.D\

**Analysis Lot:** 286400  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	3.5		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	3.7		2.0	
156-59-2	cis-1,2-Dichloroethene	15		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	4/6/12 20:37	
Dibromofluoromethane	107	70-130	4/6/12 20:37	
Toluene-d8	101	70-130	4/6/12 20:37	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1130  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 16:02

**Sample Name:** MW-5R (17.25')  
**Lab Code:** R1202157-006

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040912\D9501.D\

**Analysis Lot:** 286644  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.1		2.0	
79-01-6	Trichloroethene (TCE)	5.4		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/9/12 16:02	
Dibromofluoromethane	101	70-130	4/9/12 16:02	
Toluene-d8	98	70-130	4/9/12 16:02	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1200  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 16:32

**Sample Name:** OB-17-BR (98')  
**Lab Code:** R1202157-007

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040912\D9502.D\

**Analysis Lot:** 286644  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	130		2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/9/12 16:32	
Dibromofluoromethane	100	70-130	4/9/12 16:32	
Toluene-d8	98	70-130	4/9/12 16:32	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1230  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 17:02

**Sample Name:** OB-17-DO (41.24')  
**Lab Code:** R1202157-008

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040912\D9503.D\

**Analysis Lot:** 286644  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	13		2.0	
79-01-6	Trichloroethene (TCE)	15		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/9/12 17:02	
Dibromofluoromethane	101	70-130	4/9/12 17:02	
Toluene-d8	97	70-130	4/9/12 17:02	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1300  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 17:32

**Sample Name:** CL-9-DO (32.8')  
**Lab Code:** R1202157-009

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040912\D9504.D\

**Analysis Lot:** 286644  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	<b>73</b>		2.0	
79-01-6	Trichloroethene (TCE)	<b>180</b>		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	<b>6.1</b>		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/9/12 17:32	
Dibromofluoromethane	101	70-130	4/9/12 17:32	
Toluene-d8	99	70-130	4/9/12 17:32	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1400  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 18:02

**Sample Name:** OB-8-S (12')  
**Lab Code:** R1202157-010

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa10\data\040912\D9505.D\

**Analysis Lot:** 286644  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	56		5.0	
79-01-6	Trichloroethene (TCE)	280		5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	100		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/9/12 18:02	
Dibromofluoromethane	101	70-130	4/9/12 18:02	
Toluene-d8	97	70-130	4/9/12 18:02	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 0730  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 18:32

**Sample Name:** OB8-DO (77')  
**Lab Code:** R1202157-011

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040912\09506.D\

**Analysis Lot:** 286644  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	370		40	
79-01-6	Trichloroethene (TCE)	2500		40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	40	U	40	
156-59-2	cis-1,2-Dichloroethene	1200		40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/9/12 18:32	
Dibromofluoromethane	101	70-130	4/9/12 18:32	
Toluene-d8	99	70-130	4/9/12 18:32	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 0830  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 19:02

**Sample Name:** OB-5-S (25')  
**Lab Code:** R1202157-012

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040912\D9507.D\

**Analysis Lot:** 286644  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.4		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/9/12 19:02	
Dibromofluoromethane	101	70-130	4/9/12 19:02	
Toluene-d8	98	70-130	4/9/12 19:02	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 0900  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 19:31

**Sample Name:** OB-5-DO (81.3')  
**Lab Code:** R1202157-013

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040912\D9508.D\

**Analysis Lot:** 286644  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	600		20	
79-01-6	Trichloroethene (TCE)	1800		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	440		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/9/12 19:31	
Dibromofluoromethane	100	70-130	4/9/12 19:31	
Toluene-d8	99	70-130	4/9/12 19:31	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 0930  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 20:01

**Sample Name:** OB-5-BR (104')  
**Lab Code:** R1202157-014

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa10\data\040912\D9509.D\

**Analysis Lot:** 286644  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.2		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	110		2.0	
156-59-2	cis-1,2-Dichloroethene	6.9		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/9/12 20:01	
Dibromofluoromethane	101	70-130	4/9/12 20:01	
Toluene-d8	98	70-130	4/9/12 20:01	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 1030  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 20:31

**Sample Name:** OB4-BR (88')  
**Lab Code:** R1202157-015

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040912\D9510.D\

**Analysis Lot:** 286644  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/9/12 20:31	
Dibromofluoromethane	99	70-130	4/9/12 20:31	
Toluene-d8	98	70-130	4/9/12 20:31	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 1100  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 21:01

**Sample Name:** OB4-DO (67')  
**Lab Code:** R1202157-016

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040912\D9511.D\

**Analysis Lot:** 286644  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	59		2.0	
79-01-6	Trichloroethene (TCE)	140		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	11		2.0	
156-59-2	cis-1,2-Dichloroethene	91		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/9/12 21:01	
Dibromofluoromethane	102	70-130	4/9/12 21:01	
Toluene-d8	99	70-130	4/9/12 21:01	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 1130  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/9/12 21:31

**Sample Name:** OB4-S (23.5')  
**Lab Code:** R1202157-017

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa10\data\040912\D9512.D\

**Analysis Lot:** 286644  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/9/12 21:31	
Dibromofluoromethane	101	70-130	4/9/12 21:31	
Toluene-d8	97	70-130	4/9/12 21:31	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 0700  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 15:46

**Sample Name:** CL2-BR (41.5')  
**Lab Code:** R1202157-018

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041012\D9554.D\

**Analysis Lot:** 286809  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	4.0	U	4.0	
79-01-6	Trichloroethene (TCE)	11		4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	11		4.0	
156-59-2	cis-1,2-Dichloroethene	200		4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/10/12 15:46	
Dibromofluoromethane	103	70-130	4/10/12 15:46	
Toluene-d8	99	70-130	4/10/12 15:46	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 1200  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 16:16

**Sample Name:** OB6-BR (89')  
**Lab Code:** R1202157-019

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041012\D9555.D\

**Analysis Lot:** 286809  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	49		2.0	
79-01-6	Trichloroethene (TCE)	140		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	23		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/10/12 16:16	
Dibromofluoromethane	102	70-130	4/10/12 16:16	
Toluene-d8	99	70-130	4/10/12 16:16	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 1230  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 16:46

**Sample Name:** OB6-DO (65.6')  
**Lab Code:** R1202157-020

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041012\D9556.D\

**Analysis Lot:** 286809  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	13		10	
79-01-6	Trichloroethene (TCE)	33		10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	150		10	
156-59-2	cis-1,2-Dichloroethene	590		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/10/12 16:46	
Dibromofluoromethane	102	70-130	4/10/12 16:46	
Toluene-d8	99	70-130	4/10/12 16:46	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 1300  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 17:16

**Sample Name:** B-3 (12.5')  
**Lab Code:** R1202157-021

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041012\D9557.D\

**Analysis Lot:** 286809  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	65		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	23		2.0	
79-01-6	Trichloroethene (TCE)	11		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/10/12 17:16	
Dibromofluoromethane	102	70-130	4/10/12 17:16	
Toluene-d8	99	70-130	4/10/12 17:16	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 1400  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 17:46

**Sample Name:** MW-9A (13')  
**Lab Code:** R1202157-022

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041012\D9558.D\

**Analysis Lot:** 286809  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	3.3		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/10/12 17:46	
Dibromofluoromethane	102	70-130	4/10/12 17:46	
Toluene-d8	98	70-130	4/10/12 17:46	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 1405  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 18:16

**Sample Name:** EB-2  
**Lab Code:** R1202157-023

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041012\D9559.D\

**Analysis Lot:** 286809  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/10/12 18:16	
Dibromofluoromethane	102	70-130	4/10/12 18:16	
Toluene-d8	96	70-130	4/10/12 18:16	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 0900  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 18:45

**Sample Name:** MW-34 (63')  
**Lab Code:** R1202157-024

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041012\D9560.D\

**Analysis Lot:** 286809  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	21		20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	20	U	20	
79-01-6	Trichloroethene (TCE)	160		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	22		20	
156-59-2	cis-1,2-Dichloroethene	1300		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/10/12 18:45	
Dibromofluoromethane	103	70-130	4/10/12 18:45	
Toluene-d8	99	70-130	4/10/12 18:45	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 1000  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 19:15

**Sample Name:** CL-4-DO (27.3')  
**Lab Code:** R1202157-025

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041012\D9561.D\

**Analysis Lot:** 286809  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.2		2.0	
79-01-6	Trichloroethene (TCE)	31		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/10/12 19:15	
Dibromofluoromethane	102	70-130	4/10/12 19:15	
Toluene-d8	100	70-130	4/10/12 19:15	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 1030  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 19:45

**Sample Name:** CL-4-BR (54.5')  
**Lab Code:** R1202157-026

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041012\D9562.D\

**Analysis Lot:** 286809  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	36		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.1		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/10/12 19:45	
Dibromofluoromethane	103	70-130	4/10/12 19:45	
Toluene-d8	99	70-130	4/10/12 19:45	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 1100  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/10/12 20:15

**Sample Name:** OB42-S (13.5')  
**Lab Code:** R1202157-027

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041012\D9563.D\

**Analysis Lot:** 286809  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	78		40	
79-01-6	Trichloroethene (TCE)	2400		40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	40	U	40	
156-59-2	cis-1,2-Dichloroethene	940		40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/10/12 20:15	
Dibromofluoromethane	104	70-130	4/10/12 20:15	
Toluene-d8	100	70-130	4/10/12 20:15	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 1130  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 15:15

**Sample Name:** OB43-S (15')  
**Lab Code:** R1202157-028

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa10\data\041112\D9606.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/11/12 15:15	
Dibromofluoromethane	100	70-130	4/11/12 15:15	
Toluene-d8	98	70-130	4/11/12 15:15	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 1200  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 15:45

**Sample Name:** CL6-BR (68")  
**Lab Code:** R1202157-029

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9607.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/11/12 15:45	
Dibromofluoromethane	100	70-130	4/11/12 15:45	
Toluene-d8	98	70-130	4/11/12 15:45	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 1230  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 16:15

**Sample Name:** CL6-DO (41')  
**Lab Code:** R1202157-030

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9608.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/11/12 16:15	
Dibromofluoromethane	98	70-130	4/11/12 16:15	
Toluene-d8	97	70-130	4/11/12 16:15	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 0815  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/13/12 09:58

**Sample Name:** BR-5\_Zone 2  
**Lab Code:** R1202157-031

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041212\D9688.D\

**Analysis Lot:** 287255  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.5		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	6.2		2.0	
156-59-2	cis-1,2-Dichloroethene	12		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/13/12 09:58	
Dibromofluoromethane	103	70-130	4/13/12 09:58	
Toluene-d8	99	70-130	4/13/12 09:58	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 0830  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 17:33

**Sample Name:** BR-5\_Zone 3  
**Lab Code:** R1202157-032

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041212\D9655.D\

**Analysis Lot:** 287251  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	6.1		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	3.9		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	64		2.0	
79-01-6	Trichloroethene (TCE)	310	E	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	93		2.0	
156-59-2	cis-1,2-Dichloroethene	870	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	3.6		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	4/12/12 17:33	
Dibromofluoromethane	102	70-130	4/12/12 17:33	
Toluene-d8	100	70-130	4/12/12 17:33	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 0830  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/13/12 10:28

**Sample Name:** BR-5\_Zone 3  
**Lab Code:** R1202157-032  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041212\D9689.D\

**Analysis Lot:** 287255  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	53	D	20	
79-01-6	Trichloroethene (TCE)	270	D	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	78	D	20	
156-59-2	cis-1,2-Dichloroethene	830	D	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/13/12 10:28	
Dibromofluoromethane	103	70-130	4/13/12 10:28	
Toluene-d8	97	70-130	4/13/12 10:28	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 3/12 1400  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 17:45

**Sample Name:** BB-2  
**Lab Code:** R1202157-033

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9611.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/11/12 17:45	
Dibromofluoromethane	103	70-130	4/11/12 17:45	
Toluene-d8	98	70-130	4/11/12 17:45	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1000  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 18:14

**Sample Name:** BR1\_Zone 1  
**Lab Code:** R1202157-034

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9612.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	4/11/12 18:14	
Dibromofluoromethane	103	70-130	4/11/12 18:14	
Toluene-d8	99	70-130	4/11/12 18:14	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1030  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 18:44

**Sample Name:** BR1\_Zone 2  
**Lab Code:** R1202157-035

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9613.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/11/12 18:44	
Dibromofluoromethane	103	70-130	4/11/12 18:44	
Toluene-d8	97	70-130	4/11/12 18:44	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1040  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 19:14

**Sample Name:** BR1\_Zone 3  
**Lab Code:** R1202157-036

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9614.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/11/12 19:14	
Dibromofluoromethane	103	70-130	4/11/12 19:14	
Toluene-d8	97	70-130	4/11/12 19:14	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1100  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 19:44

**Sample Name:** CL9-BR\_Zone 1  
**Lab Code:** R1202157-037

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9615.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	660		40	
79-01-6	Trichloroethene (TCE)	1400		40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	110		40	
156-59-2	cis-1,2-Dichloroethene	6200	E	40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/11/12 19:44	
Dibromofluoromethane	103	70-130	4/11/12 19:44	
Toluene-d8	99	70-130	4/11/12 19:44	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1100  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 18:03

**Sample Name:** CL9-BR\_Zone 1  
**Lab Code:** R1202157-037  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041212\D9656.D\

**Analysis Lot:** 287251  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	680	D	100	
79-01-6	Trichloroethene (TCE)	1500	D	100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	110	D	100	
156-59-2	cis-1,2-Dichloroethene	6400	D	100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/12/12 18:03	
Dibromofluoromethane	100	70-130	4/12/12 18:03	
Toluene-d8	98	70-130	4/12/12 18:03	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1115  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 20:14

**Sample Name:** CL9-BR\_Zone 2  
**Lab Code:** R1202157-038

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9616.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 25

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	50	U	50	
79-34-5	1,1,2,2-Tetrachloroethane	50	U	50	
79-00-5	1,1,2-Trichloroethane	50	U	50	
75-34-3	1,1-Dichloroethane (1,1-DCA)	50	U	50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	50	U	50	
107-06-2	1,2-Dichloroethane	50	U	50	
78-87-5	1,2-Dichloropropane	50	U	50	
67-64-1	Acetone	250	U	250	
75-27-4	Bromodichloromethane	50	U	50	
75-25-2	Bromoform	50	U	50	
74-83-9	Bromomethane	50	U	50	
56-23-5	Carbon Tetrachloride	50	U	50	
108-90-7	Chlorobenzene	50	U	50	
75-00-3	Chloroethane	50	U	50	
67-66-3	Chloroform	50	U	50	
74-87-3	Chloromethane	50	U	50	
124-48-1	Dibromochloromethane	50	U	50	
75-09-2	Methylene Chloride	50	U	50	
127-18-4	Tetrachloroethene (PCE)	380		50	
79-01-6	Trichloroethene (TCE)	960		50	
75-69-4	Trichlorofluoromethane (CFC 11)	50	U	50	
75-01-4	Vinyl Chloride	90		50	
156-59-2	cis-1,2-Dichloroethene	4500		50	
10061-01-5	cis-1,3-Dichloropropene	50	U	50	
156-60-5	trans-1,2-Dichloroethene	50	U	50	
10061-02-6	trans-1,3-Dichloropropene	50	U	50	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/11/12 20:14	
Dibromofluoromethane	104	70-130	4/11/12 20:14	
Toluene-d8	98	70-130	4/11/12 20:14	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1130  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/11/12 20:44

**Sample Name:** CL9-BR\_Zone 3  
**Lab Code:** R1202157-039

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9617.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	120		20	
79-01-6	Trichloroethene (TCE)	310		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	300		20	
156-59-2	cis-1,2-Dichloroethene	2800	E	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/11/12 20:44	
Dibromofluoromethane	103	70-130	4/11/12 20:44	
Toluene-d8	99	70-130	4/11/12 20:44	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1130  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 18:32

**Sample Name:** CL9-BR\_Zone 3  
**Lab Code:** R1202157-039  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041212\D9657.D\

**Analysis Lot:** 287251  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 25

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	50	U	50	
79-34-5	1,1,2,2-Tetrachloroethane	50	U	50	
79-00-5	1,1,2-Trichloroethane	50	U	50	
75-34-3	1,1-Dichloroethane (1,1-DCA)	50	U	50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	50	U	50	
107-06-2	1,2-Dichloroethane	50	U	50	
78-87-5	1,2-Dichloropropane	50	U	50	
67-64-1	Acetone	250	U	250	
75-27-4	Bromodichloromethane	50	U	50	
75-25-2	Bromoform	50	U	50	
74-83-9	Bromomethane	50	U	50	
56-23-5	Carbon Tetrachloride	50	U	50	
108-90-7	Chlorobenzene	50	U	50	
75-00-3	Chloroethane	50	U	50	
67-66-3	Chloroform	50	U	50	
74-87-3	Chloromethane	50	U	50	
124-48-1	Dibromochloromethane	50	U	50	
75-09-2	Methylene Chloride	50	U	50	
127-18-4	Tetrachloroethene (PCE)	140	D	50	
79-01-6	Trichloroethene (TCE)	340	D	50	
75-69-4	Trichlorofluoromethane (CFC 11)	50	U	50	
75-01-4	Vinyl Chloride	280	D	50	
156-59-2	cis-1,2-Dichloroethene	2600	D	50	
10061-01-5	cis-1,3-Dichloropropene	50	U	50	
156-60-5	trans-1,2-Dichloroethene	50	U	50	
10061-02-6	trans-1,3-Dichloropropene	50	U	50	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/12/12 18:32	
Dibromofluoromethane	102	70-130	4/12/12 18:32	
Toluene-d8	99	70-130	4/12/12 18:32	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 00:42

**Sample Name:** Trip Blank-2  
**Lab Code:** R1202157-040

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9625.D\

**Analysis Lot:** 286968  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/12/12 00:42	
Dibromofluoromethane	103	70-130	4/12/12 00:42	
Toluene-d8	98	70-130	4/12/12 00:42	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1220  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 01:12

**Sample Name:** BR-3\_Zone 1  
**Lab Code:** R1202157-041

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa10\data\041112\09626.D\

**Analysis Lot:** 286968  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/12/12 01:12	
Dibromofluoromethane	101	70-130	4/12/12 01:12	
Toluene-d8	98	70-130	4/12/12 01:12	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1230  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 01:42

**Sample Name:** BR-3\_Zone 2  
**Lab Code:** R1202157-042

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9627.D\

**Analysis Lot:** 286968  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	4/12/12 01:42	
Dibromofluoromethane	103	70-130	4/12/12 01:42	
Toluene-d8	98	70-130	4/12/12 01:42	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1245  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 02:12

**Sample Name:** BR-3\_Zone 3  
**Lab Code:** R1202157-043

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9628.D\

**Analysis Lot:** 286968  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/12/12 02:12	
Dibromofluoromethane	103	70-130	4/12/12 02:12	
Toluene-d8	97	70-130	4/12/12 02:12	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1330  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 19:02

**Sample Name:** BR-6\_Zone 1  
**Lab Code:** R1202157-044

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041212\D9658.D\

**Analysis Lot:** 287251  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	12		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	3.5		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/12/12 19:02	
Dibromofluoromethane	102	70-130	4/12/12 19:02	
Toluene-d8	99	70-130	4/12/12 19:02	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1345  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 19:32

**Sample Name:** BR-6\_Zone 2  
**Lab Code:** R1202157-045

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041212\D9659.D\

**Analysis Lot:** 287251  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.2		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	110		2.0	
156-59-2	cis-1,2-Dichloroethene	200	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/12/12 19:32	
Dibromofluoromethane	102	70-130	4/12/12 19:32	
Toluene-d8	98	70-130	4/12/12 19:32	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1345  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/13/12 10:58

**Sample Name:** BR-6\_Zone 2  
**Lab Code:** R1202157-045  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa10\data\041212\D9690.D\

**Analysis Lot:** 287255  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	4.0	U	4.0	
79-01-6	Trichloroethene (TCE)	4.0	U	4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	100	D	4.0	
156-59-2	cis-1,2-Dichloroethene	190	D	4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/13/12 10:58	
Dibromofluoromethane	103	70-130	4/13/12 10:58	
Toluene-d8	98	70-130	4/13/12 10:58	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1400  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 03:42

**Sample Name:** BR-6\_Zone 3  
**Lab Code:** R1202157-046

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa10\data\041112\09631.D\

**Analysis Lot:** 286968  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/12/12 03:42	
Dibromofluoromethane	105	70-130	4/12/12 03:42	
Toluene-d8	98	70-130	4/12/12 03:42	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1430  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 20:02

**Sample Name:** CL8-BR\_Zone 1  
**Lab Code:** R1202157-047

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa10\data\041212\D9660.D\

**Analysis Lot:** 287251  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	120		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/12/12 20:02	
Dibromofluoromethane	102	70-130	4/12/12 20:02	
Toluene-d8	98	70-130	4/12/12 20:02	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1445  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 04:42

**Sample Name:** CL8-BR\_Zone 2  
**Lab Code:** R1202157-048

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9633.D\

**Analysis Lot:** 286968  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/12/12 04:42	
Dibromofluoromethane	103	70-130	4/12/12 04:42	
Toluene-d8	98	70-130	4/12/12 04:42	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 2/12 1450  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 05:11

**Sample Name:** CL8-BR\_Zone 3  
**Lab Code:** R1202157-049

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9634.D\

**Analysis Lot:** 286968  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/12/12 05:11	
Dibromofluoromethane	104	70-130	4/12/12 05:11	
Toluene-d8	98	70-130	4/12/12 05:11	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 0900  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 05:41

**Sample Name:** BR-7\_Zone 1  
**Lab Code:** R1202157-050

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9635.D\

**Analysis Lot:** 286968  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	6.9		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	18		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	120		2.0	
156-59-2	cis-1,2-Dichloroethene	4.8		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	4/12/12 05:41	
Dibromofluoromethane	104	70-130	4/12/12 05:41	
Toluene-d8	100	70-130	4/12/12 05:41	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 0915  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 06:11

**Sample Name:** BR-7\_Zone 2  
**Lab Code:** R1202157-051

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9636.D\

**Analysis Lot:** 286968  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	6.9		4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	4.0	U	4.0	
79-01-6	Trichloroethene (TCE)	4.0	U	4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	200		4.0	
156-59-2	cis-1,2-Dichloroethene	9.3		4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/12/12 06:11	
Dibromofluoromethane	104	70-130	4/12/12 06:11	
Toluene-d8	99	70-130	4/12/12 06:11	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 0930  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 20:32

**Sample Name:** BR-7\_Zone 3  
**Lab Code:** R1202157-052

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041212\D9661.D\

**Analysis Lot:** 287251  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10		10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	10	U	10	
79-01-6	Trichloroethene (TCE)	10	U	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	69		10	
156-59-2	cis-1,2-Dichloroethene	740		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/12/12 20:32	
Dibromofluoromethane	104	70-130	4/12/12 20:32	
Toluene-d8	96	70-130	4/12/12 20:32	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 0800  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/12/12 21:01

**Sample Name:** BR-S\_Zone 1  
**Lab Code:** R1202157-053

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUADATA\msvoa10\data\041212\D9662.D\

**Analysis Lot:** 287251  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	21		5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	210		5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	320		5.0	
156-59-2	cis-1,2-Dichloroethene	620	E	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/12/12 21:01	
Dibromofluoromethane	102	70-130	4/12/12 21:01	
Toluene-d8	99	70-130	4/12/12 21:01	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** 4/ 4/12 0800  
**Date Received:** 4/ 5/12  
**Date Analyzed:** 4/13/12 11:27

**Sample Name:** BR-S\_Zone 1  
**Lab Code:** R1202157-053  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041212\D9691.D\

**Analysis Lot:** 287255  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	25	D	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	10	U	10	
79-01-6	Trichloroethene (TCE)	220	D	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	310	D	10	
156-59-2	cis-1,2-Dichloroethene	480	D	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/13/12 11:27	
Dibromofluoromethane	103	70-130	4/13/12 11:27	
Toluene-d8	98	70-130	4/13/12 11:27	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/6/12 13:08

**Sample Name:** Method Blank  
**Lab Code:** RQ1203464-01

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040612\D9445.D\

**Analysis Lot:** 286400  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/6/12 13:08	
Dibromofluoromethane	104	70-130	4/6/12 13:08	
Toluene-d8	101	70-130	4/6/12 13:08	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/9/12 15:32

**Sample Name:** Method Blank  
**Lab Code:** RQ1203544-01

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\040912\D9500.D\

**Analysis Lot:** 286644  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/9/12 15:32	
Dibromofluoromethane	99	70-130	4/9/12 15:32	
Toluene-d8	96	70-130	4/9/12 15:32	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/10/12 13:47

**Sample Name:** Method Blank  
**Lab Code:** RQ1203467-01

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041012\D9550.D\

**Analysis Lot:** 286809  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/10/12 13:47	
Dibromofluoromethane	100	70-130	4/10/12 13:47	
Toluene-d8	98	70-130	4/10/12 13:47	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/11/12 12:16

**Sample Name:** Method Blank  
**Lab Code:** RQ1203620-01

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9600.D\

**Analysis Lot:** 286967  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/11/12 12:16	
Dibromofluoromethane	101	70-130	4/11/12 12:16	
Toluene-d8	98	70-130	4/11/12 12:16	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/12/12 00:13

**Sample Name:** Method Blank  
**Lab Code:** RQ1203627-01

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041112\D9624.D\

**Analysis Lot:** 286968  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/12/12 00:13	
Dibromofluoromethane	101	70-130	4/12/12 00:13	
Toluene-d8	98	70-130	4/12/12 00:13	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/12/12 16:03

**Sample Name:** Method Blank  
**Lab Code:** RQ1203713-01

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\041212\D9652.D\

**Analysis Lot:** 287251  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/12/12 16:03	
Dibromofluoromethane	101	70-130	4/12/12 16:03	
Toluene-d8	99	70-130	4/12/12 16:03	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/13/12 03:30

**Sample Name:** Method Blank  
**Lab Code:** RQ1203719-01

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa10\data\041212\D9675.D\

**Analysis Lot:** 287255  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	4/13/12 03:30	
Dibromofluoromethane	103	70-130	4/13/12 03:30	
Toluene-d8	99	70-130	4/13/12 03:30	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Analyzed:** 4/ 6/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 286400

Analyte Name	Lab Control Sample RQ1203464-02			Duplicate Lab Control Sample RQ1203464-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	18.4	20.0	92	19.9	20.0	100	70 - 130	8	20
1,1,2,2-Tetrachloroethane	18.6	20.0	93	19.1	20.0	96	70 - 130	3	20
1,1,2-Trichloroethane	17.9	20.0	89	18.7	20.0	94	70 - 130	5	20
1,1-Dichloroethane (1,1-DCA)	18.1	20.0	90	19.5	20.0	98	70 - 130	8	20
1,1-Dichloroethene (1,1-DCE)	18.3	20.0	92	19.3	20.0	97	70 - 130	5	20
1,2-Dichloroethane	19.0	20.0	95	20.7	20.0	104	70 - 130	9	20
1,2-Dichloropropane	18.0	20.0	90	19.9	20.0	100	70 - 130	10	20
Acetone	20.8	20.0	104	18.9	20.0	94	40 - 160	10	20
Bromodichloromethane	18.0	20.0	90	19.8	20.0	99	70 - 130	10	20
Bromoform	18.1	20.0	90	18.3	20.0	91	70 - 130	<1	20
Bromomethane	21.0	20.0	105	22.1	20.0	110	40 - 160	5	20
Carbon Tetrachloride	18.6	20.0	93	20.0	20.0	100	70 - 130	8	20
Chlorobenzene	17.1	20.0	85	18.4	20.0	92	70 - 130	7	20
Chloroethane	19.1	20.0	95	20.3	20.0	102	70 - 130	6	20
Chloroform	18.6	20.0	93	19.9	20.0	99	70 - 130	7	20
Chloromethane	22.4	20.0	112	22.4	20.0	112	40 - 160	<1	20
Dibromochloromethane	18.7	20.0	94	19.3	20.0	96	70 - 130	3	20
Methylene Chloride	17.6	20.0	88	19.2	20.0	96	70 - 130	9	20
Tetrachloroethene (PCE)	17.3	20.0	87	17.9	20.0	90	70 - 130	4	20
Trichloroethene (TCE)	16.3	20.0	82	17.4	20.0	87	70 - 130	7	20
Trichlorofluoromethane (CFC 11)	19.6	20.0	98	21.0	20.0	105	70 - 130	7	20
Vinyl Chloride	20.8	20.0	104	21.1	20.0	105	70 - 130	1	20
cis-1,2-Dichloroethene	17.0	20.0	85	18.9	20.0	94	70 - 130	10	20
cis-1,3-Dichloropropene	17.7	20.0	89	18.3	20.0	91	70 - 130	3	20
trans-1,2-Dichloroethene	17.8	20.0	89	19.2	20.0	96	70 - 130	8	20
trans-1,3-Dichloropropene	17.7	20.0	88	18.4	20.0	92	70 - 130	4	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Analyzed:** 4/ 9/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 286644

Analyte Name	Lab Control Sample RQ1203544-02			Duplicate Lab Control Sample RQ1203544-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	16.9	20.0	85	16.8	20.0	84	70 - 130	<1	20
1,1,2,2-Tetrachloroethane	17.6	20.0	88	17.0	20.0	85	70 - 130	3	20
1,1,2-Trichloroethane	18.0	20.0	90	17.5	20.0	88	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	17.7	20.0	89	17.4	20.0	87	70 - 130	2	20
1,1-Dichloroethene (1,1-DCE)	18.2	20.0	91	18.6	20.0	93	70 - 130	2	20
1,2-Dichloroethane	17.8	20.0	89	17.6	20.0	88	70 - 130	1	20
1,2-Dichloropropane	17.6	20.0	88	17.6	20.0	88	70 - 130	<1	20
Acetone	21.0	20.0	105	18.9	20.0	95	40 - 160	10	20
Bromodichloromethane	16.7	20.0	84	16.6	20.0	83	70 - 130	<1	20
Bromoform	17.9	20.0	89	17.4	20.0	87	70 - 130	3	20
Bromomethane	21.7	20.0	108	21.3	20.0	107	40 - 160	2	20
Carbon Tetrachloride	17.2	20.0	86	17.6	20.0	88	70 - 130	2	20
Chlorobenzene	17.8	20.0	89	17.5	20.0	88	70 - 130	2	20
Chloroethane	18.3	20.0	91	18.4	20.0	92	70 - 130	<1	20
Chloroform	17.9	20.0	89	17.2	20.0	86	70 - 130	4	20
Chloromethane	22.2	20.0	111	21.9	20.0	109	40 - 160	2	20
Dibromochloromethane	18.6	20.0	93	17.8	20.0	89	70 - 130	4	20
Methylene Chloride	17.5	20.0	87	17.4	20.0	87	70 - 130	<1	20
Tetrachloroethene (PCE)	17.8	20.0	89	17.3	20.0	86	70 - 130	3	20
Trichloroethene (TCE)	17.0	20.0	85	17.1	20.0	85	70 - 130	<1	20
Trichlorofluoromethane (CFC 11)	18.0	20.0	90	17.9	20.0	90	70 - 130	<1	20
Vinyl Chloride	19.9	20.0	99	19.6	20.0	98	70 - 130	1	20
cis-1,2-Dichloroethene	17.2	20.0	86	17.6	20.0	88	70 - 130	2	20
cis-1,3-Dichloropropene	17.3	20.0	87	17.1	20.0	85	70 - 130	1	20
trans-1,2-Dichloroethene	17.8	20.0	89	17.9	20.0	89	70 - 130	<1	20
trans-1,3-Dichloropropene	17.2	20.0	86	17.0	20.0	85	70 - 130	1	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Analyzed:** 4/10/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 286809

Analyte Name	Lab Control Sample RQ1203467-02			Duplicate Lab Control Sample RQ1203467-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	17.6	20.0	88	15.9	20.0	80	70 - 130	10	20
1,1,2,2-Tetrachloroethane	17.0	20.0	85	17.1	20.0	85	70 - 130	<1	20
1,1,2-Trichloroethane	17.4	20.0	87	17.5	20.0	88	70 - 130	<1	20
1,1-Dichloroethane (1,1-DCA)	18.1	20.0	91	16.5	20.0	82	70 - 130	9	20
1,1-Dichloroethene (1,1-DCE)	18.7	20.0	94	17.6	20.0	88	70 - 130	6	20
1,2-Dichloroethane	18.1	20.0	91	17.6	20.0	88	70 - 130	3	20
1,2-Dichloropropane	18.0	20.0	90	16.9	20.0	85	70 - 130	6	20
Acetone	19.4	20.0	97	21.3	20.0	107	40 - 160	10	20
Bromodichloromethane	16.8	20.0	84	16.4	20.0	82	70 - 130	3	20
Bromoform	17.7	20.0	89	16.9	20.0	84	70 - 130	5	20
Bromomethane	21.2	20.0	106	18.9	20.0	95	40 - 160	12	20
Carbon Tetrachloride	17.4	20.0	87	15.6	20.0	78	70 - 130	11	20
Chlorobenzene	17.7	20.0	89	16.4	20.0	82	70 - 130	8	20
Chloroethane	19.5	20.0	97	17.8	20.0	89	70 - 130	9	20
Chloroform	18.2	20.0	91	16.8	20.0	84	70 - 130	8	20
Chloromethane	23.6	20.0	118	22.1	20.0	111	40 - 160	6	20
Dibromochloromethane	18.5	20.0	93	17.8	20.0	89	70 - 130	4	20
Methylene Chloride	18.4	20.0	92	17.0	20.0	85	70 - 130	8	20
Tetrachloroethene (PCE)	17.8	20.0	89	15.8	20.0	79	70 - 130	11	20
Trichloroethene (TCE)	17.0	20.0	85	15.6	20.0	78	70 - 130	8	20
Trichlorofluoromethane (CFC 11)	19.4	20.0	97	17.1	20.0	86	70 - 130	13	20
Vinyl Chloride	21.3	20.0	107	18.9	20.0	95	70 - 130	12	20
cis-1,2-Dichloroethene	17.3	20.0	86	16.1	20.0	81	70 - 130	7	20
cis-1,3-Dichloropropene	16.3	20.0	81	16.1	20.0	80	70 - 130	1	20
trans-1,2-Dichloroethene	18.5	20.0	93	17.0	20.0	85	70 - 130	9	20
trans-1,3-Dichloropropene	16.2	20.0	81	15.7	20.0	79	70 - 130	3	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Analyzed:** 4/11/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 286967

Analyte Name	Lab Control Sample RQ1203620-02			Duplicate Lab Control Sample RQ1203620-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	18.2	20.0	91	16.9	20.0	84	70 - 130	7	20
1,1,2,2-Tetrachloroethane	18.1	20.0	90	17.9	20.0	90	70 - 130	<1	20
1,1,2-Trichloroethane	18.5	20.0	92	18.9	20.0	94	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	18.7	20.0	93	17.5	20.0	87	70 - 130	7	20
1,1-Dichloroethene (1,1-DCE)	19.2	20.0	96	18.2	20.0	91	70 - 130	5	20
1,2-Dichloroethane	18.8	20.0	94	18.5	20.0	92	70 - 130	2	20
1,2-Dichloropropane	18.1	20.0	91	17.9	20.0	89	70 - 130	1	20
Acetone	19.3	20.0	97	22.1	20.0	110	40 - 160	13	20
Bromodichloromethane	17.3	20.0	86	17.2	20.0	86	70 - 130	<1	20
Bromoform	17.4	20.0	87	17.6	20.0	88	70 - 130	1	20
Bromomethane	19.4	20.0	97	19.3	20.0	96	40 - 160	<1	20
Carbon Tetrachloride	18.8	20.0	94	16.3	20.0	82	70 - 130	14	20
Chlorobenzene	18.3	20.0	91	17.3	20.0	86	70 - 130	6	20
Chloroethane	19.6	20.0	98	18.3	20.0	91	70 - 130	7	20
Chloroform	18.7	20.0	93	17.7	20.0	89	70 - 130	5	20
Chloromethane	23.4	20.0	117	22.1	20.0	111	40 - 160	6	20
Dibromochloromethane	18.9	20.0	94	18.9	20.0	94	70 - 130	<1	20
Methylene Chloride	18.4	20.0	92	17.8	20.0	89	70 - 130	3	20
Tetrachloroethene (PCE)	18.5	20.0	93	16.7	20.0	83	70 - 130	11	20
Trichloroethene (TCE)	17.4	20.0	87	16.8	20.0	84	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	19.9	20.0	99	18.3	20.0	91	70 - 130	8	20
Vinyl Chloride	21.2	20.0	106	19.9	20.0	99	70 - 130	6	20
cis-1,2-Dichloroethene	17.9	20.0	89	16.7	20.0	84	70 - 130	7	20
cis-1,3-Dichloropropene	17.2	20.0	86	17.0	20.0	85	70 - 130	<1	20
trans-1,2-Dichloroethene	19.0	20.0	95	17.6	20.0	88	70 - 130	8	20
trans-1,3-Dichloropropene	17.0	20.0	85	16.8	20.0	84	70 - 130	1	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Analyzed:** 4/11/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 286968

Analyte Name	Lab Control Sample RQ1203627-02			Duplicate Lab Control Sample RQ1203627-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	16.3	20.0	82	18.0	20.0	90	70 - 130	10	20
1,1,2,2-Tetrachloroethane	15.2	20.0	76	16.9	20.0	84	70 - 130	10	20
1,1,2-Trichloroethane	17.6	20.0	88	19.8	20.0	99	70 - 130	12	20
1,1-Dichloroethane (1,1-DCA)	16.5	20.0	82	18.6	20.0	93	70 - 130	12	20
1,1-Dichloroethene (1,1-DCE)	17.4	20.0	87	19.7	20.0	99	70 - 130	13	20
1,2-Dichloroethane	17.5	20.0	88	19.4	20.0	97	70 - 130	10	20
1,2-Dichloropropane	16.5	20.0	83	18.8	20.0	94	70 - 130	13	20
Acetone	22.9	20.0	115	24.8	20.0	124	40 - 160	8	20
Bromodichloromethane	16.0	20.0	80	17.9	20.0	90	70 - 130	11	20
Bromoform	16.3	20.0	82	18.3	20.0	92	70 - 130	12	20
Bromomethane	15.3	20.0	77	17.2	20.0	86	40 - 160	12	20
Carbon Tetrachloride	15.8	20.0	79	17.4	20.0	87	70 - 130	10	20
Chlorobenzene	16.4	20.0	82	18.3	20.0	91	70 - 130	11	20
Chloroethane	18.0	20.0	90	19.9	20.0	99	70 - 130	10	20
Chloroform	16.6	20.0	83	18.8	20.0	94	70 - 130	13	20
Chloromethane	20.8	20.0	104	23.1	20.0	115	40 - 160	10	20
Dibromochloromethane	16.9	20.0	84	20.0	20.0	100	70 - 130	17	20
Methylene Chloride	16.9	20.0	84	18.6	20.0	93	70 - 130	9	20
Tetrachloroethene (PCE)	16.4	20.0	82	18.1	20.0	91	70 - 130	10	20
Trichloroethene (TCE)	17.5	20.0	87	19.5	20.0	97	70 - 130	11	20
Trichlorofluoromethane (CFC 11)	18.0	20.0	90	19.7	20.0	98	70 - 130	9	20
Vinyl Chloride	19.1	20.0	96	20.8	20.0	104	70 - 130	8	20
cis-1,2-Dichloroethene	16.2	20.0	81	18.3	20.0	91	70 - 130	12	20
cis-1,3-Dichloropropene	14.9	20.0	74	17.3	20.0	87	70 - 130	15	20
trans-1,2-Dichloroethene	17.2	20.0	86	18.8	20.0	94	70 - 130	9	20
trans-1,3-Dichloropropene	14.9	20.0	74	16.9	20.0	85	70 - 130	13	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Analyzed:** 4/12/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 287251

Analyte Name	Lab Control Sample RQ1203713-02			Duplicate Lab Control Sample RQ1203713-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	18.4	20.0	92	17.3	20.0	86	70 - 130	6	20
1,1,2,2-Tetrachloroethane	18.0	20.0	90	17.4	20.0	87	70 - 130	3	20
1,1,2-Trichloroethane	18.8	20.0	94	18.8	20.0	94	70 - 130	<1	20
1,1-Dichloroethane (1,1-DCA)	19.1	20.0	96	17.6	20.0	88	70 - 130	8	20
1,1-Dichloroethene (1,1-DCE)	20.6	20.0	103	18.6	20.0	93	70 - 130	10	20
1,2-Dichloroethane	18.8	20.0	94	17.9	20.0	90	70 - 130	5	20
1,2-Dichloropropane	18.7	20.0	94	17.7	20.0	89	70 - 130	6	20
Acetone	20.9	20.0	105	21.2	20.0	106	40 - 160	1	20
Bromodichloromethane	18.0	20.0	90	16.9	20.0	85	70 - 130	6	20
Bromoform	18.5	20.0	92	17.8	20.0	89	70 - 130	4	20
Bromomethane	24.5	20.0	123	20.7	20.0	104	40 - 160	17	20
Carbon Tetrachloride	18.8	20.0	94	17.3	20.0	87	70 - 130	8	20
Chlorobenzene	18.8	20.0	94	17.4	20.0	87	70 - 130	8	20
Chloroethane	20.2	20.0	101	18.5	20.0	92	70 - 130	9	20
Chloroform	19.0	20.0	95	17.3	20.0	86	70 - 130	9	20
Chloromethane	23.1	20.0	115	21.6	20.0	108	40 - 160	7	20
Dibromochloromethane	19.0	20.0	95	18.4	20.0	92	70 - 130	4	20
Methylene Chloride	18.7	20.0	93	17.6	20.0	88	70 - 130	6	20
Tetrachloroethene (PCE)	19.1	20.0	95	17.2	20.0	86	70 - 130	10	20
Trichloroethene (TCE)	18.8	20.0	94	16.7	20.0	84	70 - 130	12	20
Trichlorofluoromethane (CFC 11)	20.2	20.0	101	17.9	20.0	89	70 - 130	12	20
Vinyl Chloride	21.6	20.0	108	19.8	20.0	99	70 - 130	9	20
cis-1,2-Dichloroethene	18.5	20.0	93	17.3	20.0	86	70 - 130	7	20
cis-1,3-Dichloropropene	18.0	20.0	90	17.0	20.0	85	70 - 130	6	20
trans-1,2-Dichloroethene	19.6	20.0	98	17.5	20.0	88	70 - 130	11	20
trans-1,3-Dichloropropene	17.8	20.0	89	16.9	20.0	84	70 - 130	5	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202157  
**Date Analyzed:** 4/13/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 287255

Analyte Name	Lab Control Sample RQ1203719-02			Duplicate Lab Control Sample RQ1203719-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	18.0	20.0	90	20.8	20.0	104	70 - 130	14	20
1,1,2,2-Tetrachloroethane	15.9	20.0	80	19.7	20.0	99	70 - 130	21 *	20
1,1,2-Trichloroethane	20.7	20.0	103	21.3	20.0	106	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	18.7	20.0	93	20.9	20.0	105	70 - 130	11	20
1,1-Dichloroethene (1,1-DCE)	18.9	20.0	95	22.2	20.0	111	70 - 130	16	20
1,2-Dichloroethane	20.1	20.0	100	21.0	20.0	105	70 - 130	5	20
1,2-Dichloropropane	19.3	20.0	97	20.4	20.0	102	70 - 130	5	20
Acetone	23.4	20.0	117	20.2	20.0	101	40 - 160	15	20
Bromodichloromethane	18.8	20.0	94	19.9	20.0	99	70 - 130	6	20
Bromoform	19.5	20.0	97	19.4	20.0	97	70 - 130	<1	20
Bromomethane	15.4	20.0	77	14.6	20.0	73	40 - 160	5	20
Carbon Tetrachloride	17.6	20.0	88	20.1	20.0	100	70 - 130	13	20
Chlorobenzene	18.7	20.0	93	20.7	20.0	104	70 - 130	10	20
Chloroethane	18.7	20.0	94	22.1	20.0	111	70 - 130	17	20
Chloroform	18.7	20.0	94	21.3	20.0	106	70 - 130	13	20
Chloromethane	22.8	20.0	114	25.8	20.0	129	40 - 160	12	20
Dibromochloromethane	20.3	20.0	101	21.2	20.0	106	70 - 130	5	20
Methylene Chloride	18.7	20.0	94	21.0	20.0	105	70 - 130	12	20
Tetrachloroethene (PCE)	17.4	20.0	87	20.8	20.0	104	70 - 130	18	20
Trichloroethene (TCE)	20.7	20.0	104	19.6	20.0	98	70 - 130	5	20
Trichlorofluoromethane (CFC 11)	18.7	20.0	94	22.0	20.0	110	70 - 130	16	20
Vinyl Chloride	20.4	20.0	102	23.8	20.0	119	70 - 130	16	20
cis-1,2-Dichloroethene	18.2	20.0	91	20.4	20.0	102	70 - 130	11	20
cis-1,3-Dichloropropene	17.7	20.0	88	19.2	20.0	96	70 - 130	8	20
trans-1,2-Dichloroethene	19.0	20.0	95	21.6	20.0	108	70 - 130	13	20
trans-1,3-Dichloropropene	18.1	20.0	91	18.8	20.0	94	70 - 130	4	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Project Name Varian Beverly Raymond Cadorette	Project Number 143267-05000000 Report CC	ANALYSIS REQUESTED (Include Method Number and Container Preservative)		
Company/Address Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072	Phone # 617-589-6102	E-mail Raymond.Cadorette@Shawgrp.com	PRESERVATIVE 1	2 3 4 5 6 7 8
Sampler's Signature <i>Michael J. Leahy</i>	Sampler's Printed Name MICHAEL J. LEAHY	Sampler's E-mail MICHAEL.L@SHAWGRP.COM	NUMBER OF CONTAINERS	PRESERVATIVE KEY 0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO4 8. Other
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	TIME	MATRIX
V TB-1		3/26/12	1430	EW
V EB-1		4/12/12	0830	LW
V MW-2R (9.5')		4/12/12	1000	EW
V MW-4R (35.5')		4/12/12	0430	EW
V MW-3R (30.2')		4/12/12	1030	EW
V MW-5R (17.25')		4/12/12	1130	EW
V OB-17-BR (98')		4/12/12	1200	EW
V OB-17-DO (41.24')		4/12/12	1230	EW
V OB-9-DO (32.8')		4/12/12	1300	EW
V OB-8-S (12')		4/12/12	1400	EW
SPECIAL INSTRUCTIONS/COMMENTS Metals = Field Filtered Site specific VOC list Massachusetts CAM analyses reporting and QA/QC. Email GISKey formatted EDD and PDF of report to: Catherine.Mainville@Shawgrp.com. 1. TRIP BANK PROVIDED BY LAB				
See QAPP <input type="checkbox"/>	STATE WHERE SAMPLES WERE COLLECTED: MA	RECEIVED BY <i>Amy Hentschke</i> Signature Amy Hentschke Printed Name Amy Hentschke Firm AHS	RELINQUISHED BY <i>Michael J. Leahy</i> Signature Michael J. Leahy Printed Name Michael J. Leahy Firm Shaw	RECEIVED BY <i>Michael J. Leahy</i> Signature Michael J. Leahy Printed Name Michael J. Leahy Firm Shaw
TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day 2 day 3 day 4 day 5 day <input checked="" type="checkbox"/> Standard		REPORT REQUIREMENTS I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data		
INVOICE INFORMATION PO #: BILL TO: Shaw Environmental		REQUESTED REPORT DATE		
Edata Yes RELINQUISHED		R1202157 Shaw Environmental & Infrastructure, Inc. Varian Beverly		
Signature Printed Name Firm Date/Time		Signature Printed Name Firm Date/Time		





# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

143267-05000000 PAGE 2 OF 6

<b>Project Name</b> Varian Beverly <b>Project Manager</b> Raymond Cadorette <b>Company/Address</b> Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072 <b>Phone #</b> 617-589-6102 <b>E-mail</b> Raymond.cadorette@shawgrp.com <b>Sampler's Signature</b>		<b>Project Number</b> 143267-05000000 <b>Report CC</b>		<b>ANALYSIS REQUESTED (Include Method Number and Container Preservative)</b> PRESERVATIVE: 1 NUMBER OF CONTAINERS: 3 GCMs VOAs: 8260, 624, 625 GC VOAs: 8270, 625 PESTICIDES: 8021, 601602 PCBs: 8081, 608 METALS, TOTAL: 608 METALS, DISSOLVED: (List in comments below) E148960 Site Specific List Chloride		<b>Preservative Key</b> 0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zr. Acetate 6. MeOH 7. NaHSO4 8. Other	
<b>CLIENT SAMPLE ID</b> OB8-DO (77') OB-5-5 (25') OB-5-DO (81.3') OS-5-BR (104') OB4-BR (88') OB4-DO (67') OB4-5 (23.5') CL2-BR (41.5') OB6-BR (89') OB6-DO (65.6')		<b>FOR OFFICE USE ONLY</b> <b>LAB ID</b> GW <b>MATRIX</b>		<b>SAMPLING DATE</b> 4/3/12 0730 4/3/12 0830 4/3/12 0900 4/3/12 0930 4/3/12 1030 4/3/12 1100 4/3/12 1130 4/3/12 0700 4/3/12 1200 4/3/12 1230		<b>REMARKS/ALTERNATE DESCRIPTION</b>	
<b>SPECIAL INSTRUCTIONS/COMMENTS</b> Metals = Field Filtered Site specific VOC list Massachusetts CAM analyses reporting and QA/QC. Email GISKey formatted EDD and PDF of report to: Catherine.Mainville@Shawgrp.com.		<b>TURNAROUND REQUIREMENTS</b> RUSH (SURCHARGES APPLY) 1 day 2 day 3 day 4 day 5 day <input checked="" type="checkbox"/> Standard		<b>REPORT REQUIREMENTS</b> I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data		<b>INVOICE INFORMATION</b> PO #: BILL TO: Shaw Environmental	
<input type="checkbox"/> See OAPP STATE WHERE SAMPLES WERE COLLECTED:		<b>REQUESTED REPORT DATE</b>		Edata Yes No		<b>RECEIVED BY</b> Signature: [Signature] Printed Name: [Name] Firm: [Firm] Date/Time: [Date/Time]	
<b>RECEIVED BY</b> Signature: [Signature] Printed Name: [Name] Firm: [Firm] Date/Time: [Date/Time]		<b>RECEIVED BY</b> Signature: [Signature] Printed Name: [Name] Firm: [Firm] Date/Time: [Date/Time]		<b>RECEIVED BY</b> Signature: [Signature] Printed Name: [Name] Firm: [Firm] Date/Time: [Date/Time]		<b>RECEIVED BY</b> Signature: [Signature] Printed Name: [Name] Firm: [Firm] Date/Time: [Date/Time]	

Project Name <b>Varian Beverly</b>		Project Number <b>143267-050000000</b>		ANALYSIS REQUESTED (include Method Number and Container Preservative)	
Project Manager <b>Raymond Cadorette</b>		Report CC			
Company/Address <b>Shaw Environmental, Inc.</b>					
<b>100 Technology Center Drive</b>					
<b>Stoughton, MA 02072</b>					
Phone #		E-mail		PRESERVATIVE	
<b>617-589-6102</b>		<b>Raymond.cadorette@shawgrp.com</b>		<b>210</b>	
Sampler's Signature		Sampler's Printed Name		PRELIMINARY COMMENTS	
				<input type="checkbox"/> GCMS VOAs <input type="checkbox"/> GCMS SVOAs <input type="checkbox"/> GC VOA's <input type="checkbox"/> PESTICIDES <input type="checkbox"/> PCBs <input type="checkbox"/> METALS, TOTAL <input type="checkbox"/> METALS, DISSOLVED <input type="checkbox"/> METALS, TOTAL <input type="checkbox"/> CHLORIDE	
CLIENT SAMPLE ID		FOR OFFICE USE ONLY		NUMBER OF CONTAINERS	
B-3 (12.5')		LAB ID		3	
MW-9A (13')		DATE		3	
EB-2		TIME		3	
MW-34 (6.3')		MATRIX		3	
CL-4-D0 (27.3')		GW		3	
CL-4-BR (54.5')				3	
OB42-S (13.5')				3	
OB43-S (15')				3	
CL6-BR (68')				3	
CL6-D0 (41')				3	
SPECIAL INSTRUCTIONS/COMMENTS <b>Metals = Field Filtered</b> <b>Site Specific VOC List</b> <b>Massachusetts CAM analyses reporting and QA/QC.</b> <b>Email GISKey formatted EDD and PDF of report to:</b> <b>Catherine.Mainville@Shawgrp.com</b>					
TURNAROUND REQUIREMENTS		REPORT REQUIREMENTS		INVOICE INFORMATION	
RUSH (SURCHARGES APPLY) <input type="checkbox"/> 1 day <input type="checkbox"/> 2 day <input type="checkbox"/> 3 day <input type="checkbox"/> 4 day <input type="checkbox"/> 5 day <input checked="" type="checkbox"/> Standard		<input type="checkbox"/> I. Results Only <input type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data		PO #: BILL TO: <b>Shaw Environmental</b>	
REQUESTED REPORT DATE		Edata <input type="checkbox"/> Yes <input type="checkbox"/> No			
RECEIVED BY		RECEIVED BY		RECEIVED BY	
Signature		Signature		Signature	
Printed Name		Printed Name		Printed Name	
Firm		Firm		Firm	
Date/Time		Date/Time		Date/Time	
4/15/12 0900		4/15/12 0900		4/15/12 0900	

See QAPP

STATE WHERE SAMPLES WERE COLLECTED:



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

Project Name <b>Varian Beverly</b>		Project Number <b>143267-05000000</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>Raymond Cadorette</b>		Report CC		PRESERVATIVE <b>1</b>	
Company/Address <b>Shaw Environmental, Inc.</b> 100 Technology Center Drive Stoughton, MA 02072					
Phone # <b>617-589-6102</b>		E-mail <b>Raymond.Cadorette@Shawgrp.com</b>		METALS, TOTAL (List in comments below) _____ METALS, DISSOLVED (List in comments below) _____ PCBs <input type="checkbox"/> 8082 <input type="checkbox"/> 608 <input type="checkbox"/> 8081 <input type="checkbox"/> 608 PESTICIDES <input type="checkbox"/> 8021 <input type="checkbox"/> 601/602 GC VOAs <input type="checkbox"/> 8270 <input type="checkbox"/> 625 GCMS SVOAs <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> CLP GCMS VOAs <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> CLP	
Sampler's Signature <i>Oliver [Signature]</i>		Sampler's Printed Name <b>Raymond Mays</b>			
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	TIME	MATRIX	NUMBER OF CONTAINERS
BR-5-Zoned		4-4-12	8:15	GW	3
BR-5-Zone3		4-4-12	8:30		3
BB-2		4/3/12	1400		3
SPECIAL INSTRUCTIONS/COMMENTS <b>Metals = Field Filtered</b> Site specific VOC list Massachusetts CAM analyses reporting and QA/QC. Email GISKey formatted EDD and PDF of report to: Catherine.Mainville@Shawgrp.com					
TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day <input type="checkbox"/> 2 day <input type="checkbox"/> 3 day <input type="checkbox"/> 4 day <input type="checkbox"/> 5 day <input type="checkbox"/> <input checked="" type="checkbox"/> Standard			REPORT REQUIREMENTS I. Results Only _____ II. Results + QC Summaries (LCS, DUP, MSMSD as required) _____ III. Results + QC and Calibration Summaries _____ IV. Data Validation Report with Raw Data _____		
REQUESTED REPORT DATE _____ Edata <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>			INVOICE INFORMATION PO #: _____ BILL TO: <b>Shaw Environmental</b>		
RELINQUISHED BY Signature: <i>[Signature]</i> Printed Name: <b>Raymond Cadorette</b> Firm: <b>SAEW</b> Date/Time: <b>4/11/12 1400</b>		RECEIVED BY Signature: <i>[Signature]</i> Printed Name: <b>Ann Botzke</b> Firm: <b>ALC</b> Date/Time: <b>4/11/12 0900</b>		RECEIVED BY Signature: _____ Printed Name: _____ Firm: _____ Date/Time: _____	

Project Name <b>Varian Beverly</b>		Project Number <b>143267-050000000</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>Raymond Cadorette</b>		Report CC		PRESERVATIVE <b>1</b>	
Company/Address <b>Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072</b>		E-mail <b>Raymond.Cadorette@shawgrp.com</b>		PRELIMINARY ANALYSIS <b>Site Specific List</b>	
Phone # <b>617-589-6102</b>		Sampler's Printed Name <b>Austin Magnum</b>		METALS, DISSOLVED (List in comments below)	
Sampler's Signature <i>[Signature]</i>		FOR OFFICE USE ONLY		METALS, TOTAL (List in comments below)	
CLIENT SAMPLE ID	LAB ID	DATE	SAMPLING TIME	MATRIX	REMARKS/ALTERNATE DESCRIPTION
BR1-Zone 1		4-2-12	10:00	GW	Chloride
BR1-Zone 2		4-2-12	10:30		Site Specific List
BR1-Zone 3		4-2-12	10:40		
CL9-BR-Zone 1		4-2-12	11:00		
CL9-BR-Zone 2		4-2-12	11:15		
CL9-BR-Zone 3		4-2-12	11:30		
Trip Blank-2		4-2-12	11:30		
BR-3-Zone 1		4-2-12	12:20		
BR-3-Zone 2		4-2-12	12:30		
BR-3-Zone 3		4-2-12	12:45		

Preservative Key  
 0. NONE  
 1. HCL  
 2. HNO3  
 3. H2SO4  
 4. NaOH  
 5. Zn-Acetate  
 6. MeOH  
 7. NaHSO4  
 8. Other \_\_\_\_\_

TURNAROUND REQUIREMENTS  
 RUSH (SURCHARGES APPLY)  
 1 day \_\_\_ 2 day \_\_\_ 3 day \_\_\_  
 4 day \_\_\_ 5 day \_\_\_  
 Standard

REPORT REQUIREMENTS  
 I. Results Only  
 II. Results + QC Summaries (LCS, DUP, MS/MSD as required)  
 III. Results + QC and Calibration Summaries  
 IV. Data Validation Report with Raw Data

INVOICE INFORMATION  
 PO #:  
 BILL TO:  
**Shaw Environmental**

RECEIVED BY  
 Signature  
 Printed Name  
 Firm  
 Date/Time

RECEIVED BY  
 Signature  
 Printed Name  
 Firm  
 Date/Time

SPECIAL INSTRUCTIONS/COMMENTS  
**Metals = Field Filtered**  
 Site specific VOC list  
 Massachusetts CAM analyses reporting and QA/QC.  
 Email GISKey formatted EDD and PDF of report to:  
 Catherine.Mainville@shawgrp.com

RECEIVED BY  
 Signature  
 Printed Name  
 Firm  
 Date/Time

Project Name			Project Number			Report CC			ANALYSIS REQUESTED (Include Method Number and Container Preservative)		
Varian Beverly			143267-05000000								
Project Manager			Company/Address			PRESERVATIVE			REMARKS/ALTERNATE DESCRIPTION		
Raymond Cadorette			Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072			1					
Phone #			E-mail			NUMBER OF CONTAINERS			GC/MS VOAs		
617-589-6102			raymond.cadorette@shawgrp.com			3			<input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> CLP List <input type="checkbox"/> 8270 <input type="checkbox"/> 625 <input type="checkbox"/> GC VOAs		
Sampler's Signature			Sampler's Printed Name			GC/MS SVOAs			METALS, TOTAL		
<i>[Signature]</i>			Austin Magnet			<input type="checkbox"/> 8280 <input type="checkbox"/> 601/602 <input type="checkbox"/> 8021 <input type="checkbox"/> 601/602 <input type="checkbox"/> PESTICIDES <input type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> PCBs <input type="checkbox"/> 608			<input type="checkbox"/> METALS, DISSOLVED <input type="checkbox"/> METALS, TOTAL <input type="checkbox"/> EPH 8260 VOAs <input type="checkbox"/> Full List <input type="checkbox"/> Chloride		
CLIENT SAMPLE ID			FOR OFFICE USE ONLY			SAMPLING DATE			MATRIX		
BR-6-Zone 1			LAB ID			4-2-12 13:30			GW		
BR-6-Zone 2						4-2-12 13:45					
BR-6-Zone 3						4-2-12 14:00					
CLP-BR-Zone 1						4-2-12 14:30					
CLP-BR-Zone 2						4-2-12 14:45					
CLP-BR-Zone 3						4-2-12 14:50					
BR-7-Zone 1						4-4-12 9:00					
BR-7-Zone 2						4-4-12 9:15					
BR-7-Zone 3						4-4-12 9:30					
BR-5-Zone 1						4-4-12 8:00					
SPECIAL INSTRUCTIONS/COMMENTS <b>Metals = Field Filtered</b> Site specific VOC List Massachusetts CAM analyses reporting and QA/QC. Email GISKey formatted EDD and PDF of report to: Catherine.Mainville@Shawgrp.com											
See OAPP <input type="checkbox"/> STATE WHERE SAMPLES WERE COLLECTED:											
RECEIVED BY				RECEIVED BY				RECEIVED BY			
<i>[Signature]</i>				<i>[Signature]</i>				<i>[Signature]</i>			
Printed Name				Printed Name				Printed Name			
Amy Pentzke				Amy Pentzke				Amy Pentzke			
Firm				Firm				Firm			
S&M				ADS				ADS			
Date/Time				Date/Time				Date/Time			
4/11/12 1400				4/15/12 0900				4/15/12 0900			



### Cooler Receipt and Preservation Check Form

Project/Client Shaw - Varian Bio Folder Number R1202157

Cooler received on 4/5/12 by: AlH COURIER: ALS  UPS  FEDEX  VELOCITY  CLIENT

1. Were custody seals on outside of cooler?  YES  NO
2. Were custody papers properly filled out (ink, signed, etc.)?  YES  NO
3. Did all bottles arrive in good condition (unbroken)?  YES  NO
4. Did VOA vials, Alkalinity, or Sulfide have significant\* air bubbles?  YES  NO  N/A
5. Were Ice or Ice packs present?  YES  NO
6. Where did the bottles originate?  ALS/ROC  CLIENT
7. Temperature of cooler(s) upon receipt: 7.3°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes  
 If No, Explain Below  No\* No No No No

Date/Time Temperatures Taken: 4/5/12 0933

Thermometer ID: IR GUN#3 /  IR GUN#4 Reading From:  Temp Blank / Sample Bottle

**If out of Temperature, note packing/ice condition & Client Approval to Run Samples:**

All Samples held in storage location 3-002 by AlH on 4/5/12 at 0934  
 5035 samples placed in storage location \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_

PC Secondary Review: mp 4/5/12

Cooler Breakdown: Date: 4/5/12 Time: 1348 by: AlH

1. Were all bottle labels complete (i.e. analysis, preservation, etc.)?  YES  NO
2. Did all bottle labels and tags agree with custody papers?  YES  NO
3. Were correct containers used for the tests indicated?  YES  NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated  N/A

Explain any discrepancies: \_\_\_\_\_

pH	Reagent			Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
		YES	NO						
≥12	NaOH								
≤2	HNO <sub>3</sub>								
≤2	H <sub>2</sub> SO <sub>4</sub>								
<4	NaHSO <sub>4</sub>								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*	<u>411060</u>	<u>3/13</u>				

Yes = All samples OK  
 No = Samples were preserved at lab as listed  
 PM OK to Adjust: \_\_\_\_\_

Bottle lot numbers: i-315-002

Other Comments: TB-1 & TB-2 - 1 vial w/ bubble  
1 vial for BR-7 Zone 2  
\* Not enough ice - samples double stacked in cooler. Sample bottle temps checked & none lower than temp blank.

PC Secondary Review: mp 4/5/12

\*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter





April 19, 2012

Service Request No: R1202187

Mr. Ray Cadorette  
Shaw Environmental & Infrastructure, Inc.  
100 Technology Center  
Stoughton, MA 02072

**Laboratory Results for: Varian Beverly/143267-05000000**

Dear Mr. Cadorette:


Enclosed are the results of the sample(s) submitted to our laboratory on April 6, 2012. For your reference, these analyses have been assigned our service request number **R1202187**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc. dba ALS Environmental**

  
Michael Perry  
Laboratory Manager

Page 1 of 97



ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623

PHONE 585-288-5380 FAX 585-288-8475

Columbia Analytical Services, Inc.

Part of the ALS Group A Campbell Brothers Limited Company

Environmental 

[www.caslab.com](http://www.caslab.com) ■ [www.alsglobal.com](http://www.alsglobal.com)

RIGHT SOLUTIONS RIGHT PARTNER

00001



**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** Shaw Environmental, Inc  
**Project:** Varian Beverly  
**Sample Matrix:** Water

**Service Request No.:** R1202187  
**Project Number:** 143267-05000000  
**Date Received:** 4/06/12

**CASE NARRATIVE**

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II, deliverables with Massachusetts CAM analyses reporting. When appropriate to the method, method blank results have been reported with each analytical test.

**Sample Receipt**

Water samples were collected on 4/05/12 and received at CAS in good condition at a cooler temperature of 2.8 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and CAS Job #.

**Volatile Organics**

Thirty-seven water samples were analyzed for a site list or the MASS CAM list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples GZ-1 (12.3'), W-1 (11'), AP-20 (15'), MW-14A (59'), and OB25-BR (90') were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial and continuing calibrations were compliant.

All Surrogate Standard recoveries were within QC limits.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

All samples were analyzed within the required holding time of 14 days.

No other analytical or QC problems were encountered with these analyses.

**Inorganic Analyses**

Seven water samples were analyzed for dissolved Iron and dissolved Manganese by SW-846 method 6010B and for Chloride by method SM 4500-CL-E.

The initial and continuing calibration criteria were met for all analytes.

All Blank Spike (LCS) recoveries were within QC limits.

No analytical or QC problems were encountered.

## MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc.

Project #: 143267-05000000

Project Location: Varian Beverly

RTN:

**This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):**  
R1202187 - 001 - 038

Matrices:  Groundwater  Soil/Sediment  Drinking Water  Air  Other: \_\_\_\_\_

**CAM Protocol** (check all that apply below):

8260 VOC CAM II A <input checked="" type="checkbox"/>	7470/7471 Hg CAM III B <input type="checkbox"/>	MassDEP VPH CAM IV A <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>
6010 Metals CAM III A <input checked="" type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	8082 PCB CAM V A <input type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6850 Perchlorate CAM VIII B <input type="checkbox"/>	Other: CL by SM4500

**Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes <input type="checkbox"/> No
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes <input type="checkbox"/> No
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes <input type="checkbox"/> No
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes <input type="checkbox"/> No
<b>E</b>	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes <input type="checkbox"/> No

**Responses to Questions G, H and I below are required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes <input type="checkbox"/> No <sup>1</sup>
----------	-----------------------------------------------------------------------------------------------------------	------------------------------------------------

**Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	X Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup>All negative responses must be addressed in an attached laboratory narrative.

*I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.*

Signature: Michael K. Perry

Position: Laboratory Manager

Printed Name: Michael K. Perry

Date: 4/19/12 00003

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R1202187

<u>Lab ID</u>	<u>Client ID</u>
R1202187-001	TB-4
R1202187-002	OB-41-S (13.2')
R1202187-003	OB-24-S
R1202187-004	AP-15-S (12')
R1202187-005	GZ-1 (12.3')
R1202187-006	GZ-4 (14')
R1202187-007	OB-18-DO (23.8')
R1202187-008	OB-18-S (11.2')
R1202187-009	OB-16-S (15.5')
R1202187-010	OB-16-BR (32')
R1202187-011	P-11R (8.5')
R1202187-012	CL-8-DO (51.5')
R1202187-013	EB-3
R1202187-014	W-1 (11')
R1202187-015	OB23-BR (83.5')
R1202187-016	CL-10-S (13')
R1202187-017	CL-10-BR (44.5')
R1202187-018	AP-19 (27')
R1202187-019	AP-20 (15')
R1202187-020	AP-21 (22.2')
R1202187-021	AP-13-S (16')
R1202187-022	AP-14-S (29')
R1202187-023	OB11-DO (59')
R1202187-024	OB11-BR (86')
R1202187-025	AP12-S (26')
R1202187-026	AP12-DO (56')
R1202187-027	AP26-DO (61')
R1202187-028	MW-13 (53')
R1202187-029	MW-14A (59')
R1202187-030	OB-14-DO (55')
R1202187-031	OB19-S (32')
R1202187-032	OB19-DO (57')
R1202187-033	OB25-BR (90')
R1202187-034	OB28-BR (89')
R1202187-035	OB32-DO (48')
R1202187-036	OB34-DO (62')
R1202187-037	RW-22 (62')
R1202187-038	AP-22 (18')

## REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
- H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.



### **CAS/Rochester Lab ID # for Massachusetts Certification**

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

*The Commonwealth of Massachusetts*



*Department of Environmental Protection*

*Division of Environmental Analysis  
Senator William X. Wall Experiment Station*

*certifies*

M-NY032

COLUMBIA ANALYTICAL SERVICES  
1565 JEFFERSON RD  
BUILDING 300, SUITE 360  
ROCHESTER, NY 14623-0000

*Laboratory Director:* Michael K. Perry

*for the analysis of* NON POTABLE WATER (CHEMISTRY)

*pursuant to 310 CMR 42.00*

*This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.*

*This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.*

*Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.*

A handwritten signature in cursive script, reading "Jacob C. Pascala".

*Director, Division of Environmental Analysis*

*Issued:* 01 JUL 2011

*Expires:* 30 JUN 2012

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)	Effective Date	25 AUG 2011	Expiration Date	30 JUN 2012
<u>Analytes</u>			<u>Methods</u>	
ALUMINUM			EPA 200.7	
ANTIMONY			EPA 200.7	
ANTIMONY			EPA 200.8	
ARSENIC			EPA 200.7	
ARSENIC			EPA 200.8	
BERYLLIUM			EPA 200.7	
BERYLLIUM			EPA 200.8	
CADMIUM			EPA 200.7	
CADMIUM			EPA 200.8	
CHROMIUM			EPA 200.7	
CHROMIUM			EPA 200.8	
COBALT			EPA 200.7	
COBALT			EPA 200.8	
COPPER			EPA 200.7	
COPPER			EPA 200.8	
IRON			EPA 200.7	
LEAD			EPA 200.7	
LEAD			EPA 200.8	
MANGANESE			EPA 200.7	
MANGANESE			EPA 200.8	
MERCURY			EPA 245.1	
MOLYBDENUM			EPA 200.7	
MOLYBDENUM			EPA 200.8	
NICKEL			EPA 200.7	
NICKEL			EPA 200.8	
SELENIUM			EPA 200.7	
SELENIUM			EPA 200.8	
SILVER			EPA 200.7	
SILVER			EPA 200.8	
THALLIUM			EPA 200.7	
THALLIUM			EPA 200.8	
VANADIUM			EPA 200.7	
VANADIUM			EPA 200.8	
ZINC			EPA 200.7	
ZINC			EPA 200.8	
PH			SM 4500-H-B	
SPECIFIC CONDUCTIVITY			EPA 120.1	
TOTAL DISSOLVED SOLIDS			SM 2540C	
HARDNESS (CaCO3), TOTAL			SM 2340C	
CALCIUM			EPA 200.7	
MAGNESIUM			EPA 200.7	
SODIUM			EPA 200.7	
POTASSIUM			EPA 200.7	

August 24, 2011

\*= Provisional Certification

Page 1 of 2

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COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)	Effective Date	25 AUG 2011	Expiration Date	30 JUN 2012
<u>Analytes</u>			<u>Methods</u>	
ALKALINITY, TOTAL			SM 2320B	
CHLORIDE			SM 4500-CL-E	
CHLORIDE			EPA 300.0	
FLUORIDE			EPA 300.0	
SULFATE			EPA 300.0	
AMMONIA-N			EPA 350.1	
NITRATE-N			EPA 300.0	
NITRATE-N			EPA 353.2	
KJELDAHL-N			EPA 351.2	
ORTHOPHOSPHATE			EPA 365.1	
PHOSPHORUS, TOTAL			EPA 365.1	
CHEMICAL OXYGEN DEMAND			EPA 410.4	
BIOCHEMICAL OXYGEN DEMAND			SM 5210B	
TOTAL ORGANIC CARBON			SM 5310C	
CYANIDE, TOTAL			EPA 335.4	
NON-FILTERABLE RESIDUE			SM 2540D	
OIL AND GREASE			EPA 1664	
PHENOLICS, TOTAL			EPA 420.4	
VOLATILE HALOCARBONS			EPA 801	
VOLATILE HALOCARBONS			EPA 624	
VOLATILE AROMATICS			EPA 602	
VOLATILE AROMATICS			EPA 624	
SVOC-ACID EXTRACTABLES			EPA 625	
SVOC-BASE/NEUTRAL EXTRACTABLES			EPA 625	
POLYCHLORINATED BIPHENYLS (WATEF			EPA 608	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 00:29

**Sample Name:** TB-4  
**Lab Code:** R1202187-001

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041212\F5060.D\

**Analysis Lot:** 287169  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	70-130	4/13/12 00:29	
Dibromofluoromethane	106	70-130	4/13/12 00:29	
Toluene-d8	106	70-130	4/13/12 00:29	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 0730  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 12:32

**Sample Name:** OB-41-S (13.2')  
**Lab Code:** R1202187-002

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5084.D\

**Analysis Lot:** 287333  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	<b>17</b>		2.0	
79-01-6	Trichloroethene (TCE)	<b>69</b>		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	<b>28</b>		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	4/13/12 12:32	
Dibromofluoromethane	103	70-130	4/13/12 12:32	
Toluene-d8	102	70-130	4/13/12 12:32	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 0800  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 01:24

**Sample Name:** OB-24-S  
**Lab Code:** R1202187-003

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041212\F5062.D\

**Analysis Lot:** 287169  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	4/13/12 01:24	
Dibromofluoromethane	107	70-130	4/13/12 01:24	
Toluene-d8	104	70-130	4/13/12 01:24	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 0830  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 01:52

**Sample Name:** AP-15-S (12')  
**Lab Code:** R1202187-004

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041212\F5063.D\

**Analysis Lot:** 287169  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/13/12 01:52	
Dibromofluoromethane	102	70-130	4/13/12 01:52	
Toluene-d8	101	70-130	4/13/12 01:52	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 0900  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/16/12 13:11

**Sample Name:** GZ-1 (12.3')  
**Lab Code:** R1202187-005

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041612\F5159.D\

**Analysis Lot:** 287513  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	180		10	
79-01-6	Trichloroethene (TCE)	1200	E	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	350		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	4/16/12 13:11	
Dibromofluoromethane	104	70-130	4/16/12 13:11	
Toluene-d8	99	70-130	4/16/12 13:11	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 0900  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 12:59

**Sample Name:** GZ-1 (12.3')  
**Lab Code:** R1202187-005  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5085.D\

**Analysis Lot:** 287333  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	120	D	20	
79-01-6	Trichloroethene (TCE)	760	D	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	210	D	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	4/13/12 12:59	
Dibromofluoromethane	104	70-130	4/13/12 12:59	
Toluene-d8	104	70-130	4/13/12 12:59	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 0930  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 02:48

**Sample Name:** GZ-4 (14')  
**Lab Code:** R1202187-006

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041212\F5065.D\

**Analysis Lot:** 287169  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10		10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	140		10	
79-01-6	Trichloroethene (TCE)	840		10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	600		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	4/13/12 02:48	
Dibromofluoromethane	106	70-130	4/13/12 02:48	
Toluene-d8	103	70-130	4/13/12 02:48	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1000  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 13:27

**Sample Name:** OB-18-DO (23.8')  
**Lab Code:** R1202187-007

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5086.D\

**Analysis Lot:** 287333  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	18		5.0	
79-01-6	Trichloroethene (TCE)	230		5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	24		5.0	
156-59-2	cis-1,2-Dichloroethene	370		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	4/13/12 13:27	
Dibromofluoromethane	104	70-130	4/13/12 13:27	
Toluene-d8	102	70-130	4/13/12 13:27	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1030  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 03:43

**Sample Name:** OB-18-S (11.2')  
**Lab Code:** R1202187-008

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041212\F5067.D\

**Analysis Lot:** 287169  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	4.9		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.6		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	4/13/12 03:43	
Dibromofluoromethane	107	70-130	4/13/12 03:43	
Toluene-d8	106	70-130	4/13/12 03:43	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1100  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 04:11

**Sample Name:** OB-16-S (15.5')  
**Lab Code:** R1202187-009

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041212\F5068.D\

**Analysis Lot:** 287169  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	4/13/12 04:11	
Dibromofluoromethane	107	70-130	4/13/12 04:11	
Toluene-d8	103	70-130	4/13/12 04:11	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1130  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 04:39

**Sample Name:** OB-16-BR (32')  
**Lab Code:** R1202187-010

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041212\F5069.D\

**Analysis Lot:** 287169  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	4/13/12 04:39	
Dibromofluoromethane	104	70-130	4/13/12 04:39	
Toluene-d8	102	70-130	4/13/12 04:39	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1200  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 05:07

**Sample Name:** P-11R (8.5')  
**Lab Code:** R1202187-011

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041212\F5070.D\

**Analysis Lot:** 287169  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	4/13/12 05:07	
Dibromofluoromethane	107	70-130	4/13/12 05:07	
Toluene-d8	103	70-130	4/13/12 05:07	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1230  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 05:34

**Sample Name:** CL-8-DO (51.5')  
**Lab Code:** R1202187-012

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041212\F5071.D\

**Analysis Lot:** 287169  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	4/13/12 05:34	
Dibromofluoromethane	105	70-130	4/13/12 05:34	
Toluene-d8	102	70-130	4/13/12 05:34	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1245  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 15:18

**Sample Name:** EB-3  
**Lab Code:** R1202187-013

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5090.D\

**Analysis Lot:** 287333  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/13/12 15:18	
Dibromofluoromethane	104	70-130	4/13/12 15:18	
Toluene-d8	101	70-130	4/13/12 15:18	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1300  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 15:46

**Sample Name:** W-1 (11')  
**Lab Code:** R1202187-014

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5091.D\

**Analysis Lot:** 287333  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	39		2.0	
79-01-6	Trichloroethene (TCE)	860	E	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	540	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	5.4		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	4/13/12 15:46	
Dibromofluoromethane	104	70-130	4/13/12 15:46	
Toluene-d8	102	70-130	4/13/12 15:46	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1300  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/16/12 14:36

**Sample Name:** W-1 (11')  
**Lab Code:** R1202187-014  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041612\F5162.D\

**Analysis Lot:** 287513  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	34	D	20	
79-01-6	Trichloroethene (TCE)	1000	D	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	490	D	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	70-130	4/16/12 14:36	
Dibromofluoromethane	102	70-130	4/16/12 14:36	
Toluene-d8	97	70-130	4/16/12 14:36	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1330  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 16:13

**Sample Name:** OB23-BR (83.5')  
**Lab Code:** R1202187-015

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5092.D\

**Analysis Lot:** 287333  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	100		2.0	
156-59-2	cis-1,2-Dichloroethene	70		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	4/13/12 16:13	
Dibromofluoromethane	104	70-130	4/13/12 16:13	
Toluene-d8	103	70-130	4/13/12 16:13	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1400  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 16:42

**Sample Name:** CL-10-S (13')  
**Lab Code:** R1202187-016

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041312\F5093.D\

**Analysis Lot:** 287333  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	130		2.0	
79-01-6	Trichloroethene (TCE)	3.5		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	3.2		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/13/12 16:42	
Dibromofluoromethane	105	70-130	4/13/12 16:42	
Toluene-d8	102	70-130	4/13/12 16:42	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1430  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 17:10

**Sample Name:** CL-10-BR (44.5')  
**Lab Code:** R1202187-017

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5094.D\

**Analysis Lot:** 287333  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/13/12 17:10	
Dibromofluoromethane	103	70-130	4/13/12 17:10	
Toluene-d8	100	70-130	4/13/12 17:10	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP-19 (27")  
**Lab Code:** R1202187-018

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1245  
**Date Received:** 4/ 6/12

**Basis:** NA

**General Chemistry Parameters**

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	29.0	mg/L	1.0	1	NA	4/18/12 12:26	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP-19 (27')  
**Lab Code:** R1202187-018

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1245  
**Date Received:** 4/ 6/12

**Basis:** NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/ 9/12	4/12/12 00:02	
Manganese, Dissolved	6010C	115		µg/L	10	1	4/ 9/12	4/13/12 01:00	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1245  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 17:38

**Sample Name:** AP-19 (27')  
**Lab Code:** R1202187-018

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041312\F5095.D\

**Analysis Lot:** 287333  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	940		10	
79-01-6	Trichloroethene (TCE)	85		10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	10	U	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	4/13/12 17:38	
Dibromofluoromethane	104	70-130	4/13/12 17:38	
Toluene-d8	102	70-130	4/13/12 17:38	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP-20 (15')  
**Lab Code:** R1202187-019

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1315  
**Date Received:** 4/ 6/12

**Basis:** NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	86.0	mg/L	1.0	1	NA	4/18/12 12:28	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP-20 (15')  
**Lab Code:** R1202187-019

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1315  
**Date Received:** 4/ 6/12

**Basis:** NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100 U	µg/L	100	1	4/ 9/12	4/12/12 00:08	
Manganese, Dissolved	6010C	23100	µg/L	50	5	4/ 9/12	4/13/12 01:06	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1315  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 18:06

**Sample Name:** AP-20 (15')  
**Lab Code:** R1202187-019

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5096.D\

**Analysis Lot:** 287333  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	870	E	2.0	
79-01-6	Trichloroethene (TCE)	100		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	60		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	70-130	4/13/12 18:06	
Dibromofluoromethane	106	70-130	4/13/12 18:06	
Toluene-d8	104	70-130	4/13/12 18:06	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1315  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/18/12 11:09

**Sample Name:** AP-20 (15')  
**Lab Code:** R1202187-019  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041812\F5254.D\

**Analysis Lot:** 287903  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	960	D	20	
79-01-6	Trichloroethene (TCE)	86	D	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	56	D	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/18/12 11:09	
Dibromofluoromethane	96	70-130	4/18/12 11:09	
Toluene-d8	103	70-130	4/18/12 11:09	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP-21 (22.2')  
**Lab Code:** R1202187-020

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1345  
**Date Received:** 4/ 6/12

**Basis:** NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	286	mg/L	10	10	NA	4/18/12 12:56	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP-21 (22.2')  
**Lab Code:** R1202187-020

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1345  
**Date Received:** 4/ 6/12

**Basis:** NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	1000 U	µg/L	1000	10	4/ 9/12	4/13/12 02:37	
Manganese, Dissolved	6010C	972000	µg/L	10000	1000	4/ 9/12	4/13/12 01:12	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1345  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 23:39

**Sample Name:** AP-21 (22.2')  
**Lab Code:** R1202187-020

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5108.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	140		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	70-130	4/13/12 23:39	
Dibromofluoromethane	107	70-130	4/13/12 23:39	
Toluene-d8	104	70-130	4/13/12 23:39	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1045  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/14/12 00:06

**Sample Name:** AP-13-S (16)  
**Lab Code:** R1202187-021

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5109.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	2.0	U	2.0	
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
563-58-6	1,1-Dichloropropene	2.0	U	2.0	
87-61-6	1,2,3-Trichlorobenzene	2.0	U	2.0	
96-18-4	1,2,3-Trichloropropane	2.0	U	2.0	
120-82-1	1,2,4-Trichlorobenzene	2.0	U	2.0	
95-63-6	1,2,4-Trimethylbenzene	2.0	U	2.0	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	2.0	U	2.0	
106-93-4	1,2-Dibromoethane	2.0	U	2.0	
95-50-1	1,2-Dichlorobenzene	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
108-67-8	1,3,5-Trimethylbenzene	2.0	U	2.0	
541-73-1	1,3-Dichlorobenzene	2.0	U	2.0	
142-28-9	1,3-Dichloropropane	2.0	U	2.0	
106-46-7	1,4-Dichlorobenzene	2.0	U	2.0	
123-91-1	1,4-Dioxane	40	U	40	
594-20-7	2,2-Dichloropropane	2.0	U	2.0	
78-93-3	2-Butanone (MEK)	10	U	10	
95-49-8	2-Chlorotoluene	2.0	U	2.0	
591-78-6	2-Hexanone	10	U	10	
106-43-4	4-Chlorotoluene	2.0	U	2.0	
99-87-6	p-Isopropyltoluene	2.0	U	2.0	
108-10-1	4-Methyl-2-pentanone	10	U	10	
67-64-1	Acetone	10	U	10	
71-43-2	Benzene	2.0	U	2.0	
108-86-1	Bromobenzene	2.0	U	2.0	
74-97-5	Bromochloromethane	2.0	U	2.0	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1045  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/14/12 00:06

**Sample Name:** AP-13-S (16')  
**Lab Code:** R1202187-021

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041312\F5109.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
75-15-0	Carbon Disulfide	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
74-95-3	Dibromomethane	2.0	U	2.0	
75-71-8	Dichlorodifluoromethane (CFC 12)	2.0	U	2.0	
75-09-2	Dichloromethane	2.0	U	2.0	
60-29-7	Diethyl Ether	2.0	U	2.0	
108-20-3	Diisopropyl Ether	2.0	U	2.0	
637-92-3	Ethyl tert-Butyl Ether	2.0	U	2.0	
100-41-4	Ethylbenzene	2.0	U	2.0	
87-68-3	Hexachlorobutadiene	2.0	U	2.0	
98-82-8	Isopropylbenzene (Cumene)	2.0	U	2.0	
1634-04-4	Methyl tert-Butyl Ether	2.0	U	2.0	
91-20-3	Naphthalene	2.0	U	2.0	
100-42-5	Styrene	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
109-99-9	Tetrahydrofuran (THF)	2.0	U	2.0	
108-88-3	Toluene	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
179601-23-1	m,p-Xylenes	2.0	U	2.0	
104-51-8	n-Butylbenzene	2.0	U	2.0	
103-65-1	n-Propylbenzene	2.0	U	2.0	
95-47-6	o-Xylene	2.0	U	2.0	
135-98-8	sec-Butylbenzene	2.0	U	2.0	
994-05-8	tert-Amyl Methyl Ether	2.0	U	2.0	
98-06-6	tert-Butylbenzene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143267-05000000  
Sample Matrix: Water

Service Request: R1202187  
Date Collected: 4/ 5/12 1045  
Date Received: 4/ 6/12  
Date Analyzed: 4/14/12 00:06

Sample Name: AP-13-S (16')  
Lab Code: R1202187-021

Units: µg/L  
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C  
Data File Name: J:\ACQUDATA\MSVOA8\DATA\041312\F5109.D\

Analysis Lot: 287335  
Instrument Name: R-MS-08  
Dilution Factor: 1

CAS No.	Analyte Name	Result Q	MRL	Note
10061-02-6	trans-1,3-Dichloropropene	2.0 U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	4/14/12 00:06	
Dibromofluoromethane	105	70-130	4/14/12 00:06	
Toluene-d8	103	70-130	4/14/12 00:06	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1030  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/16/12 14:08

**Sample Name:** AP-14-S (29°)  
**Lab Code:** R1202187-022

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041612\F5161.D\

**Analysis Lot:** 287513  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	9.3		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	6.4		5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	350		5.0	
79-01-6	Trichloroethene (TCE)	48		5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/16/12 14:08	
Dibromofluoromethane	107	70-130	4/16/12 14:08	
Toluene-d8	100	70-130	4/16/12 14:08	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 0930  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/14/12 01:02

**Sample Name:** OB11-DO (59')  
**Lab Code:** R1202187-023

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041312\F5111.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	83		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	21		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	4/14/12 01:02	
Dibromofluoromethane	107	70-130	4/14/12 01:02	
Toluene-d8	105	70-130	4/14/12 01:02	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 0945  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/14/12 01:30

**Sample Name:** OB11-BR (86)  
**Lab Code:** R1202187-024

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5112.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	3.2		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	45		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	5.1		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	70-130	4/14/12 01:30	
Dibromofluoromethane	108	70-130	4/14/12 01:30	
Toluene-d8	105	70-130	4/14/12 01:30	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 0825  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/14/12 01:57

**Sample Name:** AP12-S (26')  
**Lab Code:** R1202187-025

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5113.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	6.2		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	3.2		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	16		2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	4/14/12 01:57	
Dibromofluoromethane	104	70-130	4/14/12 01:57	
Toluene-d8	102	70-130	4/14/12 01:57	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 0837  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/16/12 15:33

**Sample Name:** AP12-DO (56")  
**Lab Code:** R1202187-026

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041612\F5164.D\

**Analysis Lot:** 287513  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 250

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	500	U	500	
79-34-5	1,1,2,2-Tetrachloroethane	500	U	500	
79-00-5	1,1,2-Trichloroethane	500	U	500	
75-34-3	1,1-Dichloroethane (1,1-DCA)	500	U	500	
75-35-4	1,1-Dichloroethene (1,1-DCE)	500	U	500	
107-06-2	1,2-Dichloroethane	500	U	500	
78-87-5	1,2-Dichloropropane	500	U	500	
67-64-1	Acetone	2500	U	2500	
75-27-4	Bromodichloromethane	500	U	500	
75-25-2	Bromoform	500	U	500	
74-83-9	Bromomethane	500	U	500	
56-23-5	Carbon Tetrachloride	500	U	500	
108-90-7	Chlorobenzene	500	U	500	
75-00-3	Chloroethane	500	U	500	
67-66-3	Chloroform	500	U	500	
74-87-3	Chloromethane	500	U	500	
124-48-1	Dibromochloromethane	500	U	500	
75-09-2	Methylene Chloride	500	U	500	
127-18-4	Tetrachloroethene (PCE)	14000		500	
79-01-6	Trichloroethene (TCE)	39000		500	
75-69-4	Trichlorofluoromethane (CFC 11)	500	U	500	
75-01-4	Vinyl Chloride	500	U	500	
156-59-2	cis-1,2-Dichloroethene	4200		500	
10061-01-5	cis-1,3-Dichloropropene	500	U	500	
156-60-5	trans-1,2-Dichloroethene	500	U	500	
10061-02-6	trans-1,3-Dichloropropene	500	U	500	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	4/16/12 15:33	
Dibromofluoromethane	105	70-130	4/16/12 15:33	
Toluene-d8	100	70-130	4/16/12 15:33	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1315  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/14/12 02:53

**Sample Name:** AP26-DO (61')  
**Lab Code:** R1202187-027

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5115.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 200

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	400	U	400	
79-34-5	1,1,2,2-Tetrachloroethane	400	U	400	
79-00-5	1,1,2-Trichloroethane	400	U	400	
75-34-3	1,1-Dichloroethane (1,1-DCA)	400	U	400	
75-35-4	1,1-Dichloroethene (1,1-DCE)	400	U	400	
107-06-2	1,2-Dichloroethane	400	U	400	
78-87-5	1,2-Dichloropropane	400	U	400	
67-64-1	Acetone	2000	U	2000	
75-27-4	Bromodichloromethane	400	U	400	
75-25-2	Bromoform	400	U	400	
74-83-9	Bromomethane	400	U	400	
56-23-5	Carbon Tetrachloride	400	U	400	
108-90-7	Chlorobenzene	400	U	400	
75-00-3	Chloroethane	400	U	400	
67-66-3	Chloroform	400	U	400	
74-87-3	Chloromethane	400	U	400	
124-48-1	Dibromochloromethane	400	U	400	
75-09-2	Methylene Chloride	400	U	400	
127-18-4	Tetrachloroethene (PCE)	<b>11000</b>		400	
79-01-6	Trichloroethene (TCE)	<b>27000</b>		400	
75-69-4	Trichlorofluoromethane (CFC 11)	400	U	400	
75-01-4	Vinyl Chloride	400	U	400	
156-59-2	cis-1,2-Dichloroethene	400	U	400	
10061-01-5	cis-1,3-Dichloropropene	400	U	400	
156-60-5	trans-1,2-Dichloroethene	400	U	400	
10061-02-6	trans-1,3-Dichloropropene	400	U	400	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	4/14/12 02:53	
Dibromofluoromethane	106	70-130	4/14/12 02:53	
Toluene-d8	102	70-130	4/14/12 02:53	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** MW-13 (53')  
**Lab Code:** R1202187-028

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 0915  
**Date Received:** 4/ 6/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Chloride	SM 4500-Cl- E	930	mg/L	10	10	NA	4/18/12 12:29	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** MW-13 (53')  
**Lab Code:** R1202187-028

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 0915  
**Date Received:** 4/ 6/12

**Basis:** NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	500 U	µg/L	500	5	4/ 9/12	4/13/12 02:43	
Manganese, Dissolved	6010C	563000	µg/L	10000	1000	4/ 9/12	4/13/12 01:28	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 0915  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/14/12 03:21

**Sample Name:** MW-13 (53')  
**Lab Code:** R1202187-028

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5116.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	270		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	380		5.0	
108-90-7	Chlorobenzene	5.1		5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	310		5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	11		5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	4/14/12 03:21	
Dibromofluoromethane	106	70-130	4/14/12 03:21	
Toluene-d8	105	70-130	4/14/12 03:21	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1110  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/16/12 16:01

**Sample Name:** MW-14A (59')  
**Lab Code:** R1202187-029

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041612\F5165.D\

**Analysis Lot:** 287513  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.7		2.0	
79-01-6	Trichloroethene (TCE)	200	E	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.3		2.0	
156-59-2	cis-1,2-Dichloroethene	60		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	4/16/12 16:01	
Dibromofluoromethane	106	70-130	4/16/12 16:01	
Toluene-d8	99	70-130	4/16/12 16:01	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1110  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/17/12 14:43

**Sample Name:** MW-14A (59')  
**Lab Code:** R1202187-029  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5214.D\

**Analysis Lot:** 287516  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	4.0	U	4.0	
79-01-6	Trichloroethene (TCE)	160	D	4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	4.0	U	4.0	
156-59-2	cis-1,2-Dichloroethene	50	D	4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/17/12 14:43	
Dibromofluoromethane	97	70-130	4/17/12 14:43	
Toluene-d8	103	70-130	4/17/12 14:43	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1140  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/14/12 04:17

**Sample Name:** OB-14-DO (55')  
**Lab Code:** R1202187-030

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5118.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	95		20	
79-01-6	Trichloroethene (TCE)	1200		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	130		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	107	70-130	4/14/12 04:17	
Dibromofluoromethane	106	70-130	4/14/12 04:17	
Toluene-d8	106	70-130	4/14/12 04:17	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1250  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/14/12 04:44

**Sample Name:** OB19-S (32')  
**Lab Code:** R1202187-031

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041312\F5119.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	4/14/12 04:44	
Dibromofluoromethane	103	70-130	4/14/12 04:44	
Toluene-d8	101	70-130	4/14/12 04:44	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** OB19-DO (57')  
**Lab Code:** R1202187-032

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1300  
**Date Received:** 4/ 6/12

**Basis:** NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	25.8	mg/L	1.0	1	NA	4/18/12 12:31	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143267-05000000  
Sample Matrix: Water  
Sample Name: OB19-DO (57')  
Lab Code: R1202187-032

Service Request: R1202187  
Date Collected: 4/ 5/12 1300  
Date Received: 4/ 6/12

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/ 9/12	4/12/12 00:23	
Manganese, Dissolved	6010C	5780		µg/L	10	1	4/ 9/12	4/13/12 01:34	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1330  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/14/12 05:12

**Sample Name:** OB25-BR (90°)  
**Lab Code:** R1202187-033

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5120.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	37		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	110		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	610	E	2.0	
79-01-6	Trichloroethene (TCE)	1600	E	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	1300	E	2.0	
156-59-2	cis-1,2-Dichloroethene	2200	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	140		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/14/12 05:12	
Dibromofluoromethane	102	70-130	4/14/12 05:12	
Toluene-d8	103	70-130	4/14/12 05:12	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1330  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/17/12 15:11

**Sample Name:** OB25-BR (90°)  
**Lab Code:** R1202187-033  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5215.D\

**Analysis Lot:** 287516  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 200

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	400	U	400	
79-34-5	1,1,2,2-Tetrachloroethane	400	U	400	
79-00-5	1,1,2-Trichloroethane	400	U	400	
75-34-3	1,1-Dichloroethane (1,1-DCA)	400	U	400	
75-35-4	1,1-Dichloroethene (1,1-DCE)	400	U	400	
107-06-2	1,2-Dichloroethane	400	U	400	
78-87-5	1,2-Dichloropropane	400	U	400	
67-64-1	Acetone	2000	U	2000	
75-27-4	Bromodichloromethane	400	U	400	
75-25-2	Bromoform	400	U	400	
74-83-9	Bromomethane	400	U	400	
56-23-5	Carbon Tetrachloride	400	U	400	
108-90-7	Chlorobenzene	400	U	400	
75-00-3	Chloroethane	400	U	400	
67-66-3	Chloroform	400	U	400	
74-87-3	Chloromethane	400	U	400	
124-48-1	Dibromochloromethane	400	U	400	
75-09-2	Methylene Chloride	400	U	400	
127-18-4	Tetrachloroethene (PCE)	690	D	400	
79-01-6	Trichloroethene (TCE)	7800	D	400	
75-69-4	Trichlorofluoromethane (CFC 11)	400	U	400	
75-01-4	Vinyl Chloride	6800	D	400	
156-59-2	cis-1,2-Dichloroethene	30000	D	400	
10061-01-5	cis-1,3-Dichloropropene	400	U	400	
156-60-5	trans-1,2-Dichloroethene	400	U	400	
10061-02-6	trans-1,3-Dichloropropene	400	U	400	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/17/12 15:11	
Dibromofluoromethane	96	70-130	4/17/12 15:11	
Toluene-d8	102	70-130	4/17/12 15:11	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1345  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/16/12 16:58

**Sample Name:** OB28-BR (89)  
**Lab Code:** R1202187-034

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041612\F5167.D\

**Analysis Lot:** 287513  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	4/16/12 16:58	
Dibromofluoromethane	105	70-130	4/16/12 16:58	
Toluene-d8	100	70-130	4/16/12 16:58	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** OB32-DO (48')  
**Lab Code:** R1202187-035

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1120  
**Date Received:** 4/ 6/12

**Basis:** NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	204	mg/L	5.0	5	NA	4/18/12 12:56	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** OB32-DO (48')  
**Lab Code:** R1202187-035

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1120  
**Date Received:** 4/ 6/12

**Basis:** NA

Inorganic Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	200 U	µg/L	200	2	4/ 9/12	4/13/12 02:49	
Manganese, Dissolved	6010C	190000	µg/L	10000	1000	4/ 9/12	4/13/12 01:40	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1120  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/16/12 17:26

**Sample Name:** OB32-DO (48')  
**Lab Code:** R1202187-035

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041612\F5168.D\

**Analysis Lot:** 287513  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	190		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	190		2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	41		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	42		2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	4/16/12 17:26	
Dibromofluoromethane	101	70-130	4/16/12 17:26	
Toluene-d8	98	70-130	4/16/12 17:26	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1100  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/16/12 13:40

**Sample Name:** OB34-DO (62')  
**Lab Code:** R1202187-036

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041612\F5160.D\

**Analysis Lot:** 287513  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	1200		100	
79-01-6	Trichloroethene (TCE)	8500		100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	100	U	100	
156-59-2	cis-1,2-Dichloroethene	770		100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	4/16/12 13:40	
Dibromofluoromethane	104	70-130	4/16/12 13:40	
Toluene-d8	99	70-130	4/16/12 13:40	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1150  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 14:22

**Sample Name:** RW-22 (62')  
**Lab Code:** R1202187-037

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5088.D\

**Analysis Lot:** 287333  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	6.1		4.0	
79-01-6	Trichloroethene (TCE)	47		4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	4.0	U	4.0	
156-59-2	cis-1,2-Dichloroethene	340		4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	4/13/12 14:22	
Dibromofluoromethane	105	70-130	4/13/12 14:22	
Toluene-d8	104	70-130	4/13/12 14:22	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP-22 (18')  
**Lab Code:** R1202187-038

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1415  
**Date Received:** 4/ 6/12

**Basis:** NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	1360	mg/L	20	20	NA	4/18/12 12:32	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP-22 (18')  
**Lab Code:** R1202187-038

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1415  
**Date Received:** 4/ 6/12

**Basis:** NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	2000	U	µg/L	2000	20	4/ 9/12	4/13/12 12:33	
Manganese, Dissolved	6010C	2030000		µg/L	10000	1000	4/ 9/12	4/13/12 01:46	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** 4/ 5/12 1415  
**Date Received:** 4/ 6/12  
**Date Analyzed:** 4/13/12 14:50

**Sample Name:** AP-22 (18')  
**Lab Code:** R1202187-038

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5089.D\

**Analysis Lot:** 287333  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	3.6		2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	4/13/12 14:50	
Dibromofluoromethane	102	70-130	4/13/12 14:50	
Toluene-d8	100	70-130	4/13/12 14:50	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1202187-MB1

**Service Request:** R1202187  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	1.0 U	mg/L	1.0	1	NA	4/18/12 12:23	

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1202187-MB2

**Service Request:** R1202187  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	1.0 U	mg/L	1.0	1	NA	4/18/12 12:46	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1202187-MB1

**Service Request:** R1202187  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/ 9/12	4/11/12 21:43	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	4/ 9/12	4/12/12 13:43	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1202187-MB2

**Service Request:** R1202187  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/9/12	4/11/12 21:49	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	4/9/12	4/12/12 13:49	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1202187-MB3

**Service Request:** R1202187  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/ 9/12	4/11/12 21:55	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	4/ 9/12	4/12/12 13:55	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/12/12 22:38

**Sample Name:** Method Blank  
**Lab Code:** RQ1203558-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041212\F5056.D\

**Analysis Lot:** 287169  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	4/12/12 22:38	
Dibromofluoromethane	105	70-130	4/12/12 22:38	
Toluene-d8	104	70-130	4/12/12 22:38	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/13/12 11:09

**Sample Name:** Method Blank  
**Lab Code:** RQ1203612-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5081.D\

**Analysis Lot:** 287333  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	4/13/12 11:09	
Dibromofluoromethane	105	70-130	4/13/12 11:09	
Toluene-d8	103	70-130	4/13/12 11:09	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/13/12 23:11

**Sample Name:** Method Blank  
**Lab Code:** RQ1203614-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041312\F5107.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	2.0	U	2.0	
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
563-58-6	1,1-Dichloropropene	2.0	U	2.0	
87-61-6	1,2,3-Trichlorobenzene	2.0	U	2.0	
96-18-4	1,2,3-Trichloropropane	2.0	U	2.0	
120-82-1	1,2,4-Trichlorobenzene	2.0	U	2.0	
95-63-6	1,2,4-Trimethylbenzene	2.0	U	2.0	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	2.0	U	2.0	
106-93-4	1,2-Dibromoethane	2.0	U	2.0	
95-50-1	1,2-Dichlorobenzene	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
108-67-8	1,3,5-Trimethylbenzene	2.0	U	2.0	
541-73-1	1,3-Dichlorobenzene	2.0	U	2.0	
142-28-9	1,3-Dichloropropane	2.0	U	2.0	
106-46-7	1,4-Dichlorobenzene	2.0	U	2.0	
123-91-1	1,4-Dioxane	40	U	40	
594-20-7	2,2-Dichloropropane	2.0	U	2.0	
78-93-3	2-Butanone (MEK)	10	U	10	
95-49-8	2-Chlorotoluene	2.0	U	2.0	
591-78-6	2-Hexanone	10	U	10	
106-43-4	4-Chlorotoluene	2.0	U	2.0	
99-87-6	p-Isopropyltoluene	2.0	U	2.0	
108-10-1	4-Methyl-2-pentanone	10	U	10	
67-64-1	Acetone	10	U	10	
71-43-2	Benzene	2.0	U	2.0	
108-86-1	Bromobenzene	2.0	U	2.0	
74-97-5	Bromochloromethane	2.0	U	2.0	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/13/12 23:11

**Sample Name:** Method Blank  
**Lab Code:** RQ1203614-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5107.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
75-15-0	Carbon Disulfide	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
74-95-3	Dibromomethane	2.0	U	2.0	
75-71-8	Dichlorodifluoromethane (CFC 12)	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
60-29-7	Diethyl Ether	2.0	U	2.0	
108-20-3	Diisopropyl Ether	2.0	U	2.0	
637-92-3	Ethyl tert-Butyl Ether	2.0	U	2.0	
100-41-4	Ethylbenzene	2.0	U	2.0	
87-68-3	Hexachlorobutadiene	2.0	U	2.0	
98-82-8	Isopropylbenzene (Cumene)	2.0	U	2.0	
1634-04-4	Methyl tert-Butyl Ether	2.0	U	2.0	
91-20-3	Naphthalene	2.0	U	2.0	
100-42-5	Styrene	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
109-99-9	Tetrahydrofuran (THF)	2.0	U	2.0	
108-88-3	Toluene	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
179601-23-1	m,p-Xylenes	2.0	U	2.0	
104-51-8	n-Butylbenzene	2.0	U	2.0	
103-65-1	n-Propylbenzene	2.0	U	2.0	
95-47-6	o-Xylene	2.0	U	2.0	
135-98-8	sec-Butylbenzene	2.0	U	2.0	
994-05-8	tert-Amyl Methyl Ether	2.0	U	2.0	
98-06-6	tert-Butylbenzene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/13/12 23:11

**Sample Name:** Method Blank  
**Lab Code:** RQ1203614-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041312\F5107.D\

**Analysis Lot:** 287335  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result Q	MRL	Note
10061-02-6	trans-1,3-Dichloropropene	2.0 U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/13/12 23:11	
Dibromofluoromethane	102	70-130	4/13/12 23:11	
Toluene-d8	100	70-130	4/13/12 23:11	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/16/12 11:46

**Sample Name:** Method Blank  
**Lab Code:** RQ1203668-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\MSVOA8\DATA\041612\F5156.D\

**Analysis Lot:** 287513  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/16/12 11:46	
Dibromofluoromethane	105	70-130	4/16/12 11:46	
Toluene-d8	100	70-130	4/16/12 11:46	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/17/12 13:47

**Sample Name:** Method Blank  
**Lab Code:** RQ1203670-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5212.D\

**Analysis Lot:** 287516  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	4/17/12 13:47	
Dibromofluoromethane	99	70-130	4/17/12 13:47	
Toluene-d8	105	70-130	4/17/12 13:47	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/18/12 10:36

**Sample Name:** Method Blank  
**Lab Code:** RQ1203804-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041812\F5253.D\

**Analysis Lot:** 287903  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/18/12 10:36	
Dibromofluoromethane	93	70-130	4/18/12 10:36	
Toluene-d8	101	70-130	4/18/12 10:36	

COLUMBIA ANALYTICAL SERVICES, INC.

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QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143267-05000000  
Sample Matrix: Water

Service Request: R1202187  
Date Collected: 4/5/12  
Date Received: 4/6/12  
Date Analyzed: 4/18/12

Replicate Sample Summary  
General Chemistry Parameters

Sample Name: AP-19 (27')  
Lab Code: R1202187-018

Units: mg/L  
Basis: NA

Analyte Name	Method	MRL	Sample Result	AP-19 (27')DUP Duplicate Sample		RPD	RPD Limit
				R1202187-018DUP Result	Average		
Chloride	SM 4500-Cl- E	1.0	29.0	29.5	29.3	2	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143267-05000000  
Sample Matrix: Water

Service Request: R1202187  
Date Collected: 4/5/12  
Date Received: 4/6/12  
Date Analyzed: 4/18/12

Matrix Spike Summary  
General Chemistry Parameters

Sample Name: AP-19 (27')  
Lab Code: R1202187-018

Units: mg/L  
Basis: NA

Analytical Method: SM 4500-Cl- E

AP-19 (27')MS  
Matrix Spike  
R1202187-018MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chloride	29.0	54.1	25.0	100	70 - 126

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Analyzed:** 4/18/12

**Lab Control Sample Summary  
General Chemistry Parameters**

**Units:** mg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample R1202187-LCS1			% Rec Limits
		Result	Spike Amount	% Rec	
Chloride	SM 4500-Cl- E	24.8	25.0	99	86 - 110

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COLUMBIA ANALYTICAL SERVICES, INC.

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QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143267-05000000  
Sample Matrix: Water

Service Request: R1202187  
Date Analyzed: 4/18/12

Lab Control Sample Summary  
General Chemistry Parameters

Units: mg/L  
Basis: NA

Analyte Name	Method	Lab Control Sample R1202187-LCS2			% Rec Limits
		Result	Spike Amount	% Rec	
Chloride	SM 4500-Cl- E	24.6	25.0	99	86 - 110

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COLUMBIA ANALYTICAL SERVICES, INC.

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QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Analyzed:** 4/11/12 -  
4/12/12

**Lab Control Sample Summary**  
**Inorganic Parameters**

**Units:** µg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample R1202187-LCS			% Rec Limits
		Result	Spike Amount	% Rec	
Iron, Dissolved	6010C	979	1000	98	80 - 120
Manganese, Dissolved	6010C	491	500	98	80 - 120

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Analyzed:** 4/12/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 287169

Analyte Name	Lab Control Sample RQ1203558-04			Duplicate Lab Control Sample RQ1203558-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	18.6	20.0	93	17.8	20.0	89	70 - 130	4	20
1,1,2,2-Tetrachloroethane	16.3	20.0	82	15.0	20.0	75	70 - 130	8	20
1,1,2-Trichloroethane	16.4	20.0	82	15.9	20.0	80	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	18.5	20.0	92	17.7	20.0	88	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	20.5	20.0	102	19.5	20.0	97	70 - 130	5	20
1,2-Dichloroethane	17.2	20.0	86	16.8	20.0	84	70 - 130	3	20
1,2-Dichloropropane	17.2	20.0	86	16.2	20.0	81	70 - 130	6	20
Acetone	22.2	20.0	111	19.3	20.0	96	40 - 160	14	20
Bromodichloromethane	17.7	20.0	89	16.9	20.0	84	70 - 130	5	20
Bromoform	18.8	20.0	94	17.6	20.0	88	70 - 130	7	20
Bromomethane	22.6	20.0	113	20.3	20.0	102	40 - 160	11	20
Carbon Tetrachloride	17.9	20.0	90	17.0	20.0	85	70 - 130	5	20
Chlorobenzene	17.8	20.0	89	17.1	20.0	86	70 - 130	4	20
Chloroethane	19.5	20.0	97	18.7	20.0	94	70 - 130	4	20
Chloroform	18.4	20.0	92	17.4	20.0	87	70 - 130	6	20
Chloromethane	21.2	20.0	106	20.5	20.0	103	40 - 160	3	20
Dibromochloromethane	18.0	20.0	90	17.6	20.0	88	70 - 130	2	20
Methylene Chloride	18.0	20.0	90	17.3	20.0	86	70 - 130	4	20
Tetrachloroethene (PCE)	17.7	20.0	89	16.3	20.0	82	70 - 130	8	20
Trichloroethene (TCE)	17.8	20.0	89	17.1	20.0	85	70 - 130	4	20
Trichlorofluoromethane (CFC 11)	19.4	20.0	97	18.3	20.0	92	70 - 130	6	20
Vinyl Chloride	19.9	20.0	99	18.3	20.0	92	70 - 130	8	20
cis-1,2-Dichloroethene	18.7	20.0	93	18.0	20.0	90	70 - 130	4	20
cis-1,3-Dichloropropene	15.4	20.0	77	14.5	20.0	72	70 - 130	6	20
trans-1,2-Dichloroethene	18.8	20.0	94	18.1	20.0	91	70 - 130	4	20
trans-1,3-Dichloropropene	15.2	20.0	76	14.6	20.0	73	70 - 130	4	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Analyzed:** 4/13/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 287333

Analyte Name	Lab Control Sample RQ1203612-04			Duplicate Lab Control Sample RQ1203612-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	18.7	20.0	94	18.0	20.0	90	70 - 130	4	20
1,1,2,2-Tetrachloroethane	17.4	20.0	87	16.3	20.0	82	70 - 130	6	20
1,1,2-Trichloroethane	16.3	20.0	82	15.9	20.0	80	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	18.7	20.0	94	18.1	20.0	91	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	20.9	20.0	105	19.7	20.0	99	70 - 130	6	20
1,2-Dichloroethane	17.6	20.0	88	16.9	20.0	85	70 - 130	4	20
1,2-Dichloropropane	17.0	20.0	85	16.3	20.0	81	70 - 130	4	20
Acetone	21.0	20.0	105	18.8	20.0	94	40 - 160	11	20
Bromodichloromethane	18.1	20.0	90	17.3	20.0	86	70 - 130	5	20
Bromoform	19.0	20.0	95	17.6	20.0	88	70 - 130	7	20
Bromomethane	24.9	20.0	124	21.9	20.0	110	40 - 160	13	20
Carbon Tetrachloride	18.4	20.0	92	17.1	20.0	85	70 - 130	7	20
Chlorobenzene	18.1	20.0	91	17.0	20.0	85	70 - 130	7	20
Chloroethane	19.3	20.0	96	18.2	20.0	91	70 - 130	6	20
Chloroform	19.1	20.0	95	18.5	20.0	92	70 - 130	3	20
Chloromethane	21.6	20.0	108	16.8	20.0	84	40 - 160	25 *	20
Dibromochloromethane	18.7	20.0	94	17.9	20.0	90	70 - 130	4	20
Methylene Chloride	18.4	20.0	92	17.7	20.0	88	70 - 130	4	20
Tetrachloroethene (PCE)	17.4	20.0	87	16.7	20.0	84	70 - 130	4	20
Trichloroethene (TCE)	17.7	20.0	88	16.7	20.0	84	70 - 130	6	20
Trichlorofluoromethane (CFC 11)	19.5	20.0	97	18.9	20.0	94	70 - 130	3	20
Vinyl Chloride	19.8	20.0	99	18.5	20.0	92	70 - 130	7	20
cis-1,2-Dichloroethene	19.7	20.0	98	18.1	20.0	91	70 - 130	8	20
cis-1,3-Dichloropropene	16.0	20.0	80	15.1	20.0	76	70 - 130	6	20
trans-1,2-Dichloroethene	19.5	20.0	97	18.3	20.0	91	70 - 130	6	20
trans-1,3-Dichloropropene	15.7	20.0	79	14.8	20.0	74	70 - 130	6	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Analyzed:** 4/13/12

**Lab Control Sample Summary**  
**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 287335

Analyte Name	Lab Control Sample RQ1203614-04			Duplicate Lab Control Sample RQ1203614-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	17.1	20.0	85	16.0	20.0	80	70 - 130	7	20
1,1,1-Trichloroethane (TCA)	19.5	20.0	97	17.9	20.0	89	70 - 130	8	20
1,1,2,2-Tetrachloroethane	17.1	20.0	86	17.4	20.0	87	70 - 130	2	20
1,1,2-Trichloroethane	16.8	20.0	84	16.8	20.0	84	70 - 130	<1	20
1,1-Dichloroethane (1,1-DCA)	19.4	20.0	97	17.9	20.0	90	70 - 130	8	20
1,1-Dichloroethene (1,1-DCE)	21.6	20.0	108	19.6	20.0	98	70 - 130	10	20
1,1-Dichloropropene	16.9	20.0	85	15.4	20.0	77	70 - 130	9	20
1,2,3-Trichlorobenzene	17.3	20.0	86	17.2	20.0	86	70 - 130	<1	20
1,2,3-Trichloropropane	18.4	20.0	92	18.0	20.0	90	70 - 130	2	20
1,2,4-Trichlorobenzene	17.4	20.0	87	16.4	20.0	82	70 - 130	6	20
1,2,4-Trimethylbenzene	17.6	20.0	88	16.7	20.0	83	70 - 130	5	20
1,2-Dibromo-3-chloropropane (DBCP)	19.1	20.0	96	19.4	20.0	97	70 - 130	1	20
1,2-Dibromoethane	18.5	20.0	92	18.0	20.0	90	70 - 130	3	20
1,2-Dichlorobenzene	17.7	20.0	88	16.8	20.0	84	70 - 130	5	20
1,2-Dichloroethane	18.1	20.0	91	17.2	20.0	86	70 - 130	5	20
1,2-Dichloropropane	17.7	20.0	89	16.5	20.0	83	70 - 130	7	20
1,3,5-Trimethylbenzene	18.0	20.0	90	16.9	20.0	84	70 - 130	7	20
1,3-Dichlorobenzene	17.8	20.0	89	16.8	20.0	84	70 - 130	6	20
1,3-Dichloropropane	17.0	20.0	85	16.3	20.0	82	70 - 130	4	20
1,4-Dichlorobenzene	17.8	20.0	89	17.0	20.0	85	70 - 130	4	20
1,4-Dioxane	640	400	160	618	400	155	40 - 160	3	20
2,2-Dichloropropane	16.5	20.0	83	15.0	20.0	75	70 - 130	10	20
2-Butanone (MEK)	18.3	20.0	91	17.5	20.0	87	40 - 160	5	20
2-Chlorotoluene	17.2	20.0	86	15.9	20.0	79	70 - 130	8	20
2-Hexanone	15.9	20.0	80	16.8	20.0	84	40 - 160	5	20
4-Chlorotoluene	18.1	20.0	91	14.5	20.0	72	70 - 130	22 *	20
p-Isopropyltoluene	18.6	20.0	93	17.5	20.0	87	70 - 130	6	20
4-Methyl-2-pentanone	16.1	20.0	81	16.5	20.0	82	40 - 160	2	20
Acetone	24.6	20.0	123	22.7	20.0	114	40 - 160	8	20
Benzene	18.6	20.0	93	17.4	20.0	87	70 - 130	7	20
Bromobenzene	17.5	20.0	87	16.7	20.0	83	70 - 130	5	20
Bromochloromethane	19.8	20.0	99	19.3	20.0	97	70 - 130	2	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Analyzed:** 4/13/12

**Lab Control Sample Summary**  
**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 287335

Analyte Name	Lab Control Sample RQ1203614-04			Duplicate Lab Control Sample RQ1203614-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Bromodichloromethane	18.8	20.0	94	17.9	20.0	89	70 - 130	5	20
Bromoform	19.0	20.0	95	19.0	20.0	95	70 - 130	<1	20
Bromomethane	24.9	20.0	125	21.0	20.0	105	40 - 160	17	20
Carbon Disulfide	21.7	20.0	109	20.1	20.0	101	70 - 130	8	20
Carbon Tetrachloride	19.3	20.0	97	17.2	20.0	86	70 - 130	12	20
Chlorobenzene	18.6	20.0	93	17.6	20.0	88	70 - 130	6	20
Chloroethane	20.7	20.0	104	18.9	20.0	95	70 - 130	9	20
Chloroform	19.7	20.0	99	18.5	20.0	92	70 - 130	7	20
Chloromethane	23.0	20.0	115	21.1	20.0	105	40 - 160	9	20
Dibromochloromethane	19.3	20.0	96	18.5	20.0	93	70 - 130	4	20
Dibromomethane	18.9	20.0	94	17.8	20.0	89	70 - 130	6	20
Dichlorodifluoromethane (CFC 12)	20.5	20.0	102	18.6	20.0	93	40 - 160	9	20
Methylene Chloride	19.2	20.0	96	18.2	20.0	91	70 - 130	5	20
Diethyl Ether	19.9	20.0	100	19.4	20.0	97	70 - 130	3	20
Diisopropyl Ether	18.9	20.0	94	17.9	20.0	89	70 - 130	5	20
Ethyl tert-Butyl Ether	19.3	20.0	96	18.6	20.0	93	70 - 130	4	20
Ethylbenzene	17.8	20.0	89	16.7	20.0	84	70 - 130	6	20
Hexachlorobutadiene	16.0	20.0	80	14.7	20.0	73	70 - 130	8	20
Isopropylbenzene (Cumene)	17.8	20.0	89	16.7	20.0	84	70 - 130	6	20
Methyl tert-Butyl Ether	18.9	20.0	94	18.8	20.0	94	70 - 130	<1	20
Naphthalene	17.4	20.0	87	17.5	20.0	87	70 - 130	<1	20
Styrene	18.2	20.0	91	17.2	20.0	86	70 - 130	6	20
Tetrachloroethene (PCE)	18.2	20.0	91	16.6	20.0	83	70 - 130	9	20
Tetrahydrofuran (THF)	18.3	20.0	92	18.3	20.0	92	70 - 130	<1	20
Toluene	17.9	20.0	90	16.9	20.0	85	70 - 130	6	20
Trichloroethene (TCE)	18.7	20.0	93	17.3	20.0	86	70 - 130	8	20
Trichlorofluoromethane (CFC 11)	20.1	20.0	100	18.8	20.0	94	70 - 130	6	20
Vinyl Chloride	21.0	20.0	105	18.7	20.0	94	70 - 130	11	20
cis-1,2-Dichloroethene	20.2	20.0	101	18.4	20.0	92	70 - 130	9	20
cis-1,3-Dichloropropene	16.1	20.0	81	15.3	20.0	77	70 - 130	5	20
m,p-Xylenes	37.4	40.0	93	34.8	40.0	87	70 - 130	7	20
n-Butylbenzene	18.1	20.0	90	16.7	20.0	83	70 - 130	8	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187

**Date Analyzed:** 4/13/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 287335

Analyte Name	Lab Control Sample RQ1203614-04			Duplicate Lab Control Sample RQ1203614-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
n-Propylbenzene	17.3	20.0	87	16.4	20.0	82	70 - 130	6	20
o-Xylene	18.3	20.0	92	17.4	20.0	87	70 - 130	5	20
sec-Butylbenzene	18.2	20.0	91	17.3	20.0	86	70 - 130	5	20
tert-Amyl Methyl Ether	18.3	20.0	92	17.9	20.0	90	70 - 130	2	20
tert-Butylbenzene	18.2	20.0	91	17.1	20.0	85	70 - 130	6	20
trans-1,2-Dichloroethene	20.3	20.0	102	18.7	20.0	94	70 - 130	8	20
trans-1,3-Dichloropropene	15.6	20.0	78	15.1	20.0	76	70 - 130	3	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Analyzed:** 4/16/12

**Lab Control Sample Summary**  
**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 287513

Analyte Name	Lab Control Sample RQ1203668-04			Duplicate Lab Control Sample RQ1203668-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	21.0	20.0	105	21.4	20.0	107	70 - 130	2	20
1,1,2,2-Tetrachloroethane	17.8	20.0	89	18.4	20.0	92	70 - 130	3	20
1,1,2-Trichloroethane	17.6	20.0	88	18.1	20.0	91	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	21.4	20.0	107	21.6	20.0	108	70 - 130	1	20
1,1-Dichloroethene (1,1-DCE)	24.3	20.0	121	24.0	20.0	120	70 - 130	1	20
1,2-Dichloroethane	18.7	20.0	93	19.0	20.0	95	70 - 130	2	20
1,2-Dichloropropane	18.9	20.0	94	19.4	20.0	97	70 - 130	2	20
Acetone	23.9	20.0	120	22.6	20.0	113	40 - 160	6	20
Bromodichloromethane	19.3	20.0	96	20.0	20.0	100	70 - 130	4	20
Bromoform	19.7	20.0	98	19.8	20.0	99	70 - 130	<1	20
Bromomethane	26.2	20.0	131	26.0	20.0	130	40 - 160	<1	20
Carbon Tetrachloride	19.7	20.0	98	20.4	20.0	102	70 - 130	3	20
Chlorobenzene	19.1	20.0	95	19.1	20.0	96	70 - 130	<1	20
Chloroethane	22.6	20.0	113	22.9	20.0	114	70 - 130	1	20
Chloroform	21.4	20.0	107	21.2	20.0	106	70 - 130	<1	20
Chloromethane	23.3	20.0	117	23.8	20.0	119	40 - 160	2	20
Dibromochloromethane	20.0	20.0	100	19.4	20.0	97	70 - 130	3	20
Methylene Chloride	21.4	20.0	107	21.3	20.0	106	70 - 130	<1	20
Tetrachloroethene (PCE)	18.3	20.0	91	19.3	20.0	96	70 - 130	5	20
Trichloroethene (TCE)	19.0	20.0	95	19.7	20.0	98	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	22.9	20.0	114	22.7	20.0	114	70 - 130	<1	20
Vinyl Chloride	24.1	20.0	120	24.5	20.0	123	70 - 130	2	20
cis-1,2-Dichloroethene	22.3	20.0	111	22.5	20.0	113	70 - 130	1	20
cis-1,3-Dichloropropene	17.3	20.0	87	17.8	20.0	89	70 - 130	3	20
trans-1,2-Dichloroethene	22.4	20.0	112	22.6	20.0	113	70 - 130	<1	20
trans-1,3-Dichloropropene	16.6	20.0	83	16.8	20.0	84	70 - 130	1	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Analyzed:** 4/17/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 287516

Analyte Name	Lab Control Sample RQ1203670-04			Duplicate Lab Control Sample RQ1203670-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
I,1,1-Trichloroethane (TCA)	17.2	20.0	86	16.2	20.0	81	70 - 130	6	20
1,1,2,2-Tetrachloroethane	18.0	20.0	90	17.9	20.0	90	70 - 130	<1	20
1,1,2-Trichloroethane	16.5	20.0	82	16.5	20.0	82	70 - 130	<1	20
1,1-Dichloroethane (1,1-DCA)	18.1	20.0	90	17.5	20.0	88	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	20.5	20.0	103	19.7	20.0	99	70 - 130	4	20
1,2-Dichloroethane	14.9	20.0	75	14.9	20.0	75	70 - 130	<1	20
1,2-Dichloropropane	16.1	20.0	80	16.2	20.0	81	70 - 130	<1	20
Acetone	16.6	20.0	83	20.3	20.0	102	40 - 160	20	20
Bromodichloromethane	16.1	20.0	80	15.7	20.0	79	70 - 130	2	20
Bromoform	18.1	20.0	90	18.2	20.0	91	70 - 130	<1	20
Bromomethane	23.4	20.0	117	21.7	20.0	109	40 - 160	7	20
Carbon Tetrachloride	16.0	20.0	80	15.0	20.0	75	70 - 130	7	20
Chlorobenzene	17.8	20.0	89	17.4	20.0	87	70 - 130	2	20
Chloroethane	19.5	20.0	97	19.0	20.0	95	70 - 130	3	20
Chloroform	17.6	20.0	88	17.0	20.0	85	70 - 130	4	20
Chloromethane	22.6	20.0	113	21.3	20.0	106	40 - 160	6	20
Dibromochloromethane	17.0	20.0	85	17.3	20.0	87	70 - 130	2	20
Methylene Chloride	18.0	20.0	90	17.7	20.0	89	70 - 130	2	20
Tetrachloroethene (PCE)	16.8	20.0	84	16.2	20.0	81	70 - 130	3	20
Trichloroethene (TCE)	16.3	20.0	81	15.8	20.0	79	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	17.8	20.0	89	16.9	20.0	85	70 - 130	5	20
Vinyl Chloride	20.3	20.0	102	19.6	20.0	98	70 - 130	4	20
cis-1,2-Dichloroethene	18.9	20.0	95	18.5	20.0	93	70 - 130	2	20
cis-1,3-Dichloropropene	14.9	20.0	74	14.2	20.0	71	70 - 130	5	20
trans-1,2-Dichloroethene	19.2	20.0	96	18.6	20.0	93	70 - 130	3	20
trans-1,3-Dichloropropene	14.9	20.0	74	14.7	20.0	74	70 - 130	1	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202187  
**Date Analyzed:** 4/18/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 287903

Analyte Name	Lab Control Sample RQ1203804-04			Duplicate Lab Control Sample RQ1203804-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	17.9	20.0	89	16.8	20.0	84	70 - 130	6	20
1,1,2,2-Tetrachloroethane	20.1	20.0	101	20.3	20.0	101	70 - 130	<1	20
1,1,2-Trichloroethane	18.0	20.0	90	18.2	20.0	91	70 - 130	1	20
1,1-Dichloroethane (1,1-DCA)	19.6	20.0	98	18.8	20.0	94	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	22.7	20.0	113	21.3	20.0	106	70 - 130	6	20
1,2-Dichloroethane	15.3	20.0	77	15.2	20.0	76	70 - 130	<1	20
1,2-Dichloropropane	17.7	20.0	89	17.5	20.0	88	70 - 130	1	20
Acetone	20.2	20.0	101	21.8	20.0	109	40 - 160	8	20
Bromodichloromethane	16.9	20.0	84	16.4	20.0	82	70 - 130	3	20
Bromoform	20.1	20.0	100	20.2	20.0	101	70 - 130	<1	20
Bromomethane	24.3	20.0	122	22.4	20.0	112	40 - 160	8	20
Carbon Tetrachloride	16.6	20.0	83	15.7	20.0	79	70 - 130	5	20
Chlorobenzene	19.1	20.0	95	18.8	20.0	94	70 - 130	1	20
Chloroethane	21.4	20.0	107	20.2	20.0	101	70 - 130	6	20
Chloroform	18.6	20.0	93	17.6	20.0	88	70 - 130	6	20
Chloromethane	24.1	20.0	120	22.9	20.0	115	40 - 160	5	20
Dibromochloromethane	18.6	20.0	93	18.6	20.0	93	70 - 130	<1	20
Methylene Chloride	19.5	20.0	97	19.0	20.0	95	70 - 130	2	20
Tetrachloroethene (PCE)	18.1	20.0	91	17.4	20.0	87	70 - 130	4	20
Trichloroethene (TCE)	17.7	20.0	89	16.9	20.0	84	70 - 130	5	20
Trichlorofluoromethane (CFC 11)	18.8	20.0	94	17.7	20.0	89	70 - 130	6	20
Vinyl Chloride	22.6	20.0	113	20.2	20.0	101	70 - 130	11	20
cis-1,2-Dichloroethene	20.6	20.0	103	19.2	20.0	96	70 - 130	7	20
cis-1,3-Dichloropropene	15.8	20.0	79	15.5	20.0	78	70 - 130	2	20
trans-1,2-Dichloroethene	20.6	20.0	103	19.5	20.0	98	70 - 130	5	20
trans-1,3-Dichloropropene	15.9	20.0	79	16.1	20.0	81	70 - 130	2	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Project Name <b>Varian Beverly</b>		Project Number <b>143267-05000000</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>Raymond Cadorette</b>		Report CC			
Company/Address <b>Shaw Environmental, Inc.</b>					
100 Technology Center Drive					
Stoughton, MA 02072					
Phone # <b>617-589-6102</b>	E-mail <b>Raymond.Cadorette@Shawgrp.com</b>				
Sampler's Signature <i>[Signature]</i>	Sampler's Printed Name <b>Daniel C. Lemay</b>				
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	TIME	MATRIX	NUMBER OF CONTAINERS
<b>TB-4</b>		<b>4/5/12</b>	<b>0730</b>	<b>GW</b>	<b>3</b>
<b>OB-41-5 (13.2')</b>		<b>4/5/12</b>	<b>0800</b>		<b>3</b>
<b>OB-24-5</b>		<b>4/5/12</b>	<b>0830</b>		<b>3</b>
<b>AP-15-5 (12.1')</b>		<b>4/5/12</b>	<b>0900</b>		<b>3</b>
<b>GZ-1 (12.3')</b>		<b>4/5/12</b>	<b>0930</b>		<b>3</b>
<b>GZ-4 (14.1')</b>		<b>4/5/12</b>	<b>1000</b>		<b>3</b>
<b>OB-18-20 (23.8')</b>		<b>4/5/12</b>	<b>1030</b>		<b>3</b>
<b>OB-18-5 (11.2')</b>		<b>4/5/12</b>	<b>1100</b>		<b>3</b>
<b>OB-16-5 (15.5')</b>		<b>4/5/12</b>	<b>1130</b>		<b>3</b>
<b>OB-16-BR (32.1')</b>					<b>3</b>

SPECIAL INSTRUCTIONS/COMMENTS <b>Metals = Field Filtered</b> <b>Site specific VOC list</b> <b>Massachusetts CAM analyses reporting and QA/QC.</b> <b>Email GISKey formatted EDD and PDF of report to:</b> <b>Catherine.Mainville@Shawgrp.com.</b>	TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day <input type="checkbox"/> 2 day <input type="checkbox"/> 3 day <input type="checkbox"/> 4 day <input type="checkbox"/> 5 day <input type="checkbox"/> <input checked="" type="checkbox"/> Standard	REPORT REQUIREMENTS I. Results Only <input type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MSMSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/>	INVOICE INFORMATION PO #: BILL TO: <b>Shaw Environmental</b>
	REQUESTED REPORT DATE	REINQUISHED BY	REINQUISHED BY

See QAPP <input type="checkbox"/>	STATE WHERE SAMPLES WERE COLLECTED:	RECEIVED BY	REINQUISHED BY
		Signature: <i>[Signature]</i> Printed Name: <b>Daniel Lemay</b> Firm: <b>SHAW</b> Date/Time: <b>4/5/12 1450</b>	Signature: <i>[Signature]</i> Printed Name: <b>Amy Hentschke</b> Firm: <b>SHAW</b> Date/Time: <b>4/10/12 0845</b>

Preservative Key 0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO4 8. Other _____	REMARKS/ ALTERNATE DESCRIPTION

**R1202187**  
Shaw Environmental & Infrastructure, Inc.  
Varian Beverly





# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

585.288.5380, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 2 OF 2

Project Name Varian Beverly		Project Number 143267-05000000		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager Raymond Cadorette		Report CC		PRESERVATIVE	
Company/Address Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072		E-mail Raymond.Cadorette@Shawgrp.com		PRELIMINARY ANALYSIS (List in comments below)	
Phone # 617-589-6102		Sampler's Printed Name DOAN C. LEAHY		METALS, TOTAL (List in comments below)	
Sampler's Signature <i>Michael Leahy</i>		FOR OFFICE USE ONLY		METALS, DISSOLVED (List in comments below)	
CLIENT SAMPLE ID	LAB ID	DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS
P-11R (8.5')		4/5/12	12:00	GW	3
CL-8-DO (51.5')		4/5/12	12:30		3
EB-3		4/5/12	12:45		3
W-1 (11')		4/5/12	13:00		3
OB23-BR (83.5')		4/5/12	13:30		3
CL-10-S (13')		4/5/12	14:00		3
CL-10-BR (94.5')		4/5/12	14:30		3
AP-19 (27')		4/5/12	10:45		5
AP-20 (15')		4/5/12	13:15		5
AP-21 (22.2')		4/5/12	13:45		5

SPECIAL INSTRUCTIONS/COMMENTS Metals = Field Filtered Site specific VOC list Massachusetts CAM analyses reporting and QA/QC. Email GISKey formatted EDD and PDF of report to: Catherine.Mainville@Shawgrp.com.	TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day ___ 2 day ___ 3 day ___ 4 day ___ 5 day ___ <input checked="" type="checkbox"/> Standard	REPORT REQUIREMENTS I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data	INVOICE INFORMATION PO #: BILL TO: Shaw Environmental
	REQUESTED REPORT DATE	RELEASING BY Signature Printed Name Firm Date/Time	RECEIVED BY Signature Printed Name Firm Date/Time

See QAPP <input type="checkbox"/>	STATE WHERE SAMPLES WERE COLLECTED:	RELEASING BY Signature Printed Name Firm Date/Time	RECEIVED BY Signature Printed Name Firm Date/Time
		<i>Raymond Cadorette</i> Raymond Cadorette Shaw Environmental, Inc. 4/5/12 14:50	<i>Doan C. Leahy</i> Doan C. Leahy Shaw Environmental, Inc. 4/16/12 08:45



# CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

An Employee - Owned Company **256-256-256** Rochester, NY 14609-0859 • (585) 288-5380 • 800-695-7222 x11 • FAX (585) 288-8475 PAGE 1 OF 2

SR # \_\_\_\_\_  
CAS Contact \_\_\_\_\_

Project Name <b>Varen Beach</b>		Project Number <b>143267-0500000</b>	
Project Manager <b>Raymond Cadotte</b>		Report CC	
Company/Address <b>Shaw Environmental, Inc. 100 Technology Center Drive Saughden, Mt 02072</b>			
Phone # <b>617-589-2602</b>		Email: <b>Raymond.Cadotte@shawgrp.com</b>	
Sampler's Signature <i>Raymond</i>		Sampler's Printed Name <b>Raymond</b>	
FOR OFFICE USE ONLY		MATRIX	
CLIENT SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX
AP13-S (16')	4-5-12	1045	GW
AP14-S (29')	4-5-12	1030	
OB11-DO (51')	4-5-12	930	
OB11-BR (86')	4-5-12	945	
<del>OB11-DO</del>	<del>4-5-12</del>	<del>900</del>	
AP12-S (26')	4-5-12	825	
AP12-DO (56')	4-5-12	837	
AP26-DO (61')	4-5-10	1315	
MW-13 (53')	4-5-12	915	
MW-14A (59')	4-5-12	1110	

SPECIAL INSTRUCTIONS/COMMENTS  
Metals = Field Filtered  
Site Specific VOC list.  
Massachusetts CCM analyser reporting and QA/QC  
Email GIS Key formatted EDD + PDF of report to:  
Catherine.Minnile@shawgrp.com

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1

NUMBER OF CONTAINERS: 3

GCMS VOAS  8260  624  CLP  
GCMS SVOAS  8270  625  CLP  
GC VOAS  8021  601/602  
PESTICIDES  8081  608  CLP  
PCBs  8082  608  CLP  
METALS, TOTAL (List in comments below)  
METALS, DISSOLVED (List in comments below)  
EPA 8160 site specific list  
Chloride

REMARKS/ALTERNATE DESCRIPTION

Preservative Key

- NONE
- HCL
- HNO3
- H2SO4
- Zn-Acetate
- MeOH
- NaHSO4
- Other \_\_\_\_\_

REPORT REQUIREMENTS

I. Results Only

II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

III. Results + QC and Calibration Summaries

IV. Data Validation Report with Raw Data

V. Specialized Forms / Custom Report

Edata  Yes  No

TURNAROUND REQUIREMENTS

RUSH (SURCHARGES APPLY)

24 hr  48 hr  5 day

STANDARD

REQUESTED FAX DATE \_\_\_\_\_

REQUESTED REPORT DATE \_\_\_\_\_

RECEIVED BY: \_\_\_\_\_

RELINQUISHED BY: \_\_\_\_\_

CUSTODY SEALS: Y N

RECEIVED BY: \_\_\_\_\_

RELINQUISHED BY: \_\_\_\_\_

Signature: *Raymond*  
Printed Name: **Raymond**  
Firm: **Shaw**  
Date/Time: **4-5-12 1450**

Signature: *Emily*  
Printed Name: **Emily Ventschke**  
Firm: **Shaw**  
Date/Time: **4-11-12 0845**

Project Name <b>Varian Beverly</b>		Project Number <b>143267-050000000</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>Raymond Cadorette</b>		Report CC		PRESERVATIVE	
Company/Address <b>Shaw Environmental, Inc. 100 Technology center Drive Stoughton, MA 02072</b>		E-mail <b>Raymond.Cadorette@Shawgrp.com</b>		PRELIMINARY ANALYSIS LIST	
Phone # <b>617-589-6102</b>		Sampler's Printed Name <b>Raymond Cadorette</b>		<input type="checkbox"/> GCMS VOAs <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> C/P <input type="checkbox"/> 8270 <input type="checkbox"/> 625 <input type="checkbox"/> GC VOAs <input type="checkbox"/> 8021 <input type="checkbox"/> 601/602 <input type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 8082 <input type="checkbox"/> 608 <input type="checkbox"/> METALS, TOTAL <input type="checkbox"/> METALS, DISSOLVED <input type="checkbox"/> (list in comments below) <input type="checkbox"/> PCBs <input type="checkbox"/> PESTICIDES <input type="checkbox"/> Full list	
CLIENT SAMPLE ID		FOR OFFICE USE ONLY		NUMBER OF CONTAINERS	
		LAB ID			
		DATE			
		SAMPLING TIME			
		MATRIX			
<b>OB-14-DO (55)</b>		<b>4-5-12 1140</b>		<b>3</b>	
<b>OB19-S (32)</b>		<b>4-5-12 1250</b>		<b>3</b>	
<b>OB19-DO (57)</b>		<b>4-5-12 1300</b>		<b>2</b>	
<b>OB25-BR (90)</b>		<b>4-5-12 1330</b>		<b>3</b>	
<b>OB28-BR (89)</b>		<b>4-5-12 1345</b>		<b>3</b>	
<b>OB32-DO (48)</b>		<b>4-5-12 1120</b>		<b>5</b>	
<b>OB34-DO (62)</b>		<b>4-5-12 1100</b>		<b>3</b>	
<b>RW-22 (62)</b>		<b>4-5-12 1150</b>		<b>3</b>	
<b>AP-22 (18)</b>		<b>4-5-12 1415</b>		<b>5</b>	
SPECIAL INSTRUCTIONS/COMMENTS <b>Metals = Field Filtered Site specific VOC list Massachusetts CAM analyses reporting and QA/QC. Email GISKey formatted EDD and PDF of report to: Catherine.Mainville@Shawgrp.com.</b>		TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day <input type="checkbox"/> 2 day <input type="checkbox"/> 3 day <input type="checkbox"/> 4 day <input type="checkbox"/> 5 day <input type="checkbox"/> <input checked="" type="checkbox"/> Standard		REPORT REQUIREMENTS I. Results Only <input type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/>	
See QAPP <input type="checkbox"/>		REQUESTED REPORT DATE		Edata <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>	
STATE WHERE SAMPLES WERE COLLECTED:		RECEIVED BY		RECEIVED BY	
RELINQUISHED BY		RELINQUISHED BY		RELINQUISHED BY	
Signature <i>Raymond Cadorette</i>	Signature <i>Amy Hentschke</i>	Signature <i>Amy Hentschke</i>	Signature <i>Amy Hentschke</i>	Signature <i>Amy Hentschke</i>	Signature <i>Amy Hentschke</i>
Printed Name <b>Raymond Cadorette</b>	Printed Name <b>Amy Hentschke</b>	Printed Name <b>Amy Hentschke</b>	Printed Name <b>Amy Hentschke</b>	Printed Name <b>Amy Hentschke</b>	Printed Name <b>Amy Hentschke</b>
Firm <b>Shaw</b>	Firm <b>Shaw</b>	Firm <b>Shaw</b>	Firm <b>Shaw</b>	Firm <b>Shaw</b>	Firm <b>Shaw</b>
Date/Time <b>4-5-12 1150</b>	Date/Time <b>4-5-12 0845</b>	Date/Time <b>4-5-12 0845</b>	Date/Time <b>4-5-12 0845</b>	Date/Time <b>4-5-12 0845</b>	Date/Time <b>4-5-12 0845</b>
INVOICE INFORMATION		PO #:		BILL TO: <b>Shaw Environmental</b>	



# Cooler Receipt and Preservation Check Form

Project/Client Shaw Folder Number R12-2187

Cooler received on 4/6/12 by ALT COURIER: ALS  FEDEX VELOCITY CLIENT

- Were custody seals on outside of cooler?  YES NO
- Were custody papers properly filled out (ink, signed, etc.)?  YES NO
- Did all bottles arrive in good condition (unbroken)?  YES NO
- Did VOA vials, Alkalinity, or Sulfide have significant\* air bubbles? YES  NO N/A
- Were Ice or Ice packs present?  YES NO
- Where did the bottles originate?  ALS/ROC CLIENT
- Temperature of cooler(s) upon receipt: 2.8°

Is the temperature within 0° - 6° C?:  Yes Yes Yes Yes Yes  
 If No, Explain Below  No  No  No  No  No

Date/Time Temperatures Taken: 4/6/12 0900

Thermometer ID: IR GUN#3 /  IR GUN#4 Reading From:  Temp Blank  Sample Bottle

If out of Temperature, note packing/ice condition & Client Approval to Run Samples:

All Samples held in storage location R-002 by ALT on 4/6/12 at 0901  
 5035 samples placed in storage location \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_

PC Secondary Review: mcp 4/6/12

Cooler Breakdown: Date: 4/6/12 Time: 1138 by: ALT

- Were all bottle labels complete (i.e. analysis, preservation, etc.)?  YES NO
- Did all bottle labels and tags agree with custody papers? YES  NO
- Were correct containers used for the tests indicated?  YES NO
- Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated  N/A

Explain any discrepancies: \_\_\_\_\_

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO <sub>3</sub>		X	BDB2103119I	3/13	AP-21(22.2')	1ml	BDB26119I	L2
≤2	H <sub>2</sub> SO <sub>4</sub>								
<4	NaHSO <sub>4</sub>								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*	4111060	3/13				

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: \_\_\_\_\_

Bottle lot numbers: 1-315-002, 031212-2k

Other Comments:

\* bottles for Cl & Dissolved Fe+Mn rec'd for AP-19(27'), AP-20(15'), AP-21(22.2') but not listed on COC.

PC Secondary Review: mcp 4/19/12  
H:\SMODOCS\Cooler Receipt 5.doc

\*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

00097



## Data Usability Worksheet

**Project Name :** Varian Medical Systems, Inc **Job Number :** 143267  
**Prepared By:** Sheila Barry **Date :** 5/15/2012  
**Analyte Group :** Volatile Organics **Analytical Method :** EPA Method 8260C  
EPA Method SM 4500-CL-E  
EPA Method 6010B  
                                   Chloride  
                                   Metals (Fe & Mn)

**Completed MADEP CAM Certification Form included:** Yes **Laboratory ID No. :** 1202267

**Chain of Custody included in Data Package ?** Yes **Is it Complete ?** Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
4/6/2012	VOC 8260C		14 days	4/13, 4/17, 4/18, and 4/19/2012
4/6/2012	Chloride EPA Method SM 4500-CL-E		28 days	4/18/2012
4/6/2012	Dissolved iron and manganese 6010B		6 months	4/19, 4/20, and 4/23/2012

**Sample temperature within QC limits:** No, temperature 8.2 degrees (outside 0-6 degree range). However, samples were stored at appropriate temperature upon receipt at laboratory.

**Surrogate Recovery**

Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

**MS/MSD**

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

**Laboratory Control Samples**

Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: NA

**Equipment Field Blank ID :** 4/18/2012  
**Trip Blank ID :** 4/18/2012  
                                   4/13, 4/17, 4/18, and 4/19/2012  
**Method Blank:** VOC 8260C 4/19/2012  
                                   Chloride EPA Method SM 4500-CL-E 4/18/2012  
                                   Dissolved iron and manganese 6010B 4/18 and 4/19/2012

**Were any compounds identified in the method blank, field blank or trip blank above detection limits ?** No

**If so, list Sample ID/Compound/Concentration/Units:** NA

**Notes:**

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the methods. Samples OB27-BR, OB36-DO, B-2, CL3-DO, and APBIO-01 were reanalyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D". The continuing calibration criteria were met for all analytes except for the following: 1,2-Dichloroethane, Carbon Tetrachloride, and cis-1,3-Dichloropropene. Data associated with these compounds under the continuing calibration criteria should be considered as estimated. However, since no positive detections were seen, no data was affected.

**Reviewed By:** Pernilla Haley



April 24, 2012

Service Request No: R1202267

Mr. Ray Cadorette  
Shaw Environmental & Infrastructure, Inc.  
100 Technology Center  
Stoughton, MA 02072

**Laboratory Results for: Varian Beverly/143267-05000000**

Dear Mr. Cadorette:

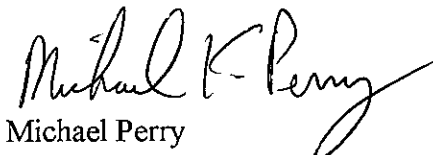
Enclosed are the results of the sample(s) submitted to our laboratory on April 11, 2012. For your reference, these analyses have been assigned our service request number **R1202267**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

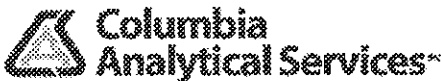
Please contact me if you have any questions. My extension is 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc. dba ALS Environmental**

  
Michael Perry  
Laboratory Manager

Page 1 of 81



ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623  
PHONE 585-288-5380 | FAX 585-288-8475  
Columbia Analytical Services, Inc.  
Part of the ALS Group A Campbell Brothers Limited Company

## COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** Shaw Environmental, Inc  
**Project:** Varian Beverly  
**Sample Matrix:** Water

**Service Request No.:** R1202267  
**Project Number:** 143267-05000000  
**Date Received:** 4/11/12

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II, deliverables with Massachusetts CAM analyses reporting. When appropriate to the method, method blank results have been reported with each analytical test.

#### Sample Receipt

Water samples were collected on 4/06/12 and received at CAS in good condition at a cooler temperature of 8.2 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and CAS Job #.

#### Volatile Organics

Thirty-three water samples were analyzed for a site list or the MASS CAM list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples OB27-BR, OB36-DO, B-2, CL3-DO, and APB10-01 were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes except the following:

- The CCV from 4/17/12 – for 1,2-Dichloroethane.
- The CCV from 4/17/12 (night run) – 1,2-Dichloroethane, Carbon Tetrachloride, and cis-1,3-Dichloropropene.
- The CCV from 4/18/12 - 1,2-Dichloroethane

These CCVs were greater the 20 % but less than 40 %. Data for samples associated with these compounds under this CCV should be considered as estimated. However, since no positive detections were seen, no data was affected.

All Surrogate Standard recoveries were within QC limits.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

All samples were analyzed within the required holding time of 14 days.

No other analytical or QC problems were encountered with these analyses.

**Inorganic Analyses**

Five water samples were analyzed for dissolved Iron and dissolved Manganese by SW-846 method 6010B and for Chloride by method SM 4500-CL-E.

The initial and continuing calibration criteria were met for all analytes.

All Blank Spike (LCS) recoveries were within QC limits.

No analytical or QC problems were encountered.

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R1202267

<u>Lab ID</u>	<u>Client ID</u>
R1202267-001	OB10-BR
R1202267-002	AP12-BR
R1202267-003	OB27-BR
R1202267-004	OB36-DO
R1202267-005	OB37-DO
R1202267-006	CL11-S
R1202267-007	CL11-DO
R1202267-008	B-2
R1202267-009	OB35-DO
R1202267-010	AP27-DO
R1202267-011	OB38-DO
R1202267-012	MW-36
R1202267-013	CL3-DO
R1202267-014	CL3-S
R1202267-015	Culvert Outfall
R1202267-016	STRHA-7A
R1202267-017	STRHA-7B
R1202267-018	APB10-01
R1202267-019	P-19A
R1202267-020	P-20R
R1202267-021	OB20-S
R1202267-022	OB20-DO
R1202267-023	OB20-BR
R1202267-024	OB21-DO
R1202267-025	OB21-BR
R1202267-026	Stream ASCDS
R1202267-027	MW1-32 Tozer
R1202267-028	MW2-32 Tozer
R1202267-029	MW3-32 Tozer
R1202267-030	MW-33B
R1202267-031	CL10-DO
R1202267-032	Trip Blank-5
R1202267-033	EB-4

## REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
- H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.



### **CAS/Rochester Lab ID # for Massachusetts Certification**

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

*The Commonwealth of Massachusetts*



*Department of Environmental Protection*

*Division of Environmental Analysis  
Senator William X. Wall Experiment Station*

*certifies*

M-NY032

COLUMBIA ANALYTICAL SERVICES  
1565 JEFFERSON RD  
BUILDING 300, SUITE 360  
ROCHESTER, NY 14623-0000

*Laboratory Director:* Michael K. Perry

*for the analysis of* NON POTABLE WATER (CHEMISTRY)

*pursuant to 310 CMR 42.00*

*This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.*

*This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.*

*Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.*

*David C. Jacobs*

*Director, Division of Environmental Analysis*

*Issued:* 01 JUL 2011

*Expires:* 30 JUN 2012

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBLA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)	Effective Date	25 AUG 2011	Expiration Date	30 JUN 2012
<u>Analytes</u>			<u>Methods</u>	
ALUMINUM			EPA 200.7	
ANTIMONY			EPA 200.7	
ANTIMONY			EPA 200.8	
ARSENIC			EPA 200.7	
ARSENIC			EPA 200.8	
BERYLLIUM			EPA 200.7	
BERYLLIUM			EPA 200.8	
CADMIUM			EPA 200.7	
CADMIUM			EPA 200.8	
CHROMIUM			EPA 200.7	
CHROMIUM			EPA 200.8	
COBALT			EPA 200.7	
COBALT			EPA 200.8	
COPPER			EPA 200.7	
COPPER			EPA 200.8	
IRON			EPA 200.7	
LEAD			EPA 200.7	
LEAD			EPA 200.8	
MANGANESE			EPA 200.7	
MANGANESE			EPA 200.8	
MERCURY			EPA 245.1	
MOLYBDENUM			EPA 200.7	
MOLYBDENUM			EPA 200.8	
NICKEL			EPA 200.7	
NICKEL			EPA 200.8	
SELENIUM			EPA 200.7	
SELENIUM			EPA 200.8	
SILVER			EPA 200.7	
SILVER			EPA 200.8	
THALLIUM			EPA 200.7	
THALLIUM			EPA 200.8	
VANADIUM			EPA 200.7	
VANADIUM			EPA 200.8	
ZINC			EPA 200.7	
ZINC			EPA 200.8	
PH			SM 4500-H-B	
SPECIFIC CONDUCTIVITY			EPA 120.1	
TOTAL DISSOLVED SOLIDS			SM 2540C	
HARDNESS (CaCO3), TOTAL			SM 2340C	
CALCIUM			EPA 200.7	
MAGNESIUM			EPA 200.7	
SODIUM			EPA 200.7	
POTASSIUM			EPA 200.7	



COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)      Effective Date      25 AUG 2011      Expiration Date      30 JUN 2012

<u>Analytes</u>	<u>Methods</u>
ALKALINITY, TOTAL	SM 2320B
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1350  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/13/12 13:52

**Sample Name:** OB10-BR  
**Lab Code:** R1202267-001

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\041312\Z1026.D\

**Analysis Lot:** 287359  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	250		20	
79-01-6	Trichloroethene (TCE)	1600		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	300		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	4/13/12 13:52	
Dibromofluoromethane	102	70-130	4/13/12 13:52	
Toluene-d8	100	70-130	4/13/12 13:52	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP12-BR  
**Lab Code:** R1202267-002

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1415  
**Date Received:** 4/11/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Chloride	SM 4500-Cl- E	890		mg/L	100	100	NA	4/18/12 12:57	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP12-BR  
**Lab Code:** R1202267-002

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1415  
**Date Received:** 4/11/12

**Basis:** NA

**Inorganic Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Iron, Dissolved	6010C	2500 U	µg/L	2500	5	4/16/12	4/20/12 05:03	
Manganese, Dissolved	6010C	8970000	µg/L	50000	1000	4/16/12	4/23/12 11:00	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/6/12 14:15  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 16:43

**Sample Name:** AP12-BR  
**Lab Code:** R1202267-002

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041712\U7961.D\

**Analysis Lot:** 287761  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.2		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	3.6		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	4/17/12 16:43	
Dibromofluoromethane	103	70-130	4/17/12 16:43	
Toluene-d8	98	70-130	4/17/12 16:43	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** OB27-BR  
**Lab Code:** R1202267-003

**Service Request:** R1202267  
**Date Collected:** 4/6/12 1300  
**Date Received:** 4/11/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Chloride	SM 4500-Cl- E	273		mg/L	10	10	NA	4/18/12 12:58	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** OB27-BR  
**Lab Code:** R1202267-003

**Service Request:** R1202267  
**Date Collected:** 4/6/12 1300  
**Date Received:** 4/11/12

**Basis:** NA

**Inorganic Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Iron, Dissolved	6010C	500	U	µg/L	500	1	4/16/12	4/19/12 08:58	
Manganese, Dissolved	6010C	2230000		µg/L	5000	100	4/16/12	4/20/12 00:19	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/6/12 1300  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/13/12 17:53

**Sample Name:** OB27-BR  
**Lab Code:** R1202267-003

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\041312\Z1034.D\

**Analysis Lot:** 287359  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	33		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	54		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2400	E	2.0	
79-01-6	Trichloroethene (TCE)	6600	E	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	26		2.0	
156-59-2	cis-1,2-Dichloroethene	3000	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	28		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	4/13/12 17:53	
Dibromofluoromethane	99	70-130	4/13/12 17:53	
Toluene-d8	97	70-130	4/13/12 17:53	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1300  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 22:13

**Sample Name:** OB27-BR  
**Lab Code:** R1202267-003  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041712\U7971.D\

**Analysis Lot:** 287761  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 200

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	400	U	400	
79-34-5	1,1,2,2-Tetrachloroethane	400	U	400	
79-00-5	1,1,2-Trichloroethane	400	U	400	
75-34-3	1,1-Dichloroethane (1,1-DCA)	400	U	400	
75-35-4	1,1-Dichloroethene (1,1-DCE)	400	U	400	
107-06-2	1,2-Dichloroethane	400	U	400	
78-87-5	1,2-Dichloropropane	400	U	400	
67-64-1	Acetone	2000	U	2000	
75-27-4	Bromodichloromethane	400	U	400	
75-25-2	Bromoform	400	U	400	
74-83-9	Bromomethane	400	U	400	
56-23-5	Carbon Tetrachloride	400	U	400	
108-90-7	Chlorobenzene	400	U	400	
75-00-3	Chloroethane	400	U	400	
67-66-3	Chloroform	400	U	400	
74-87-3	Chloromethane	400	U	400	
124-48-1	Dibromochloromethane	400	U	400	
75-09-2	Methylene Chloride	400	U	400	
127-18-4	Tetrachloroethene (PCE)	3200	D	400	
79-01-6	Trichloroethene (TCE)	20000	D	400	
75-69-4	Trichlorofluoromethane (CFC 11)	400	U	400	
75-01-4	Vinyl Chloride	400	U	400	
156-59-2	cis-1,2-Dichloroethene	4700	D	400	
10061-01-5	cis-1,3-Dichloropropene	400	U	400	
156-60-5	trans-1,2-Dichloroethene	400	U	400	
10061-02-6	trans-1,3-Dichloropropene	400	U	400	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	4/17/12 22:13	
Dibromofluoromethane	100	70-130	4/17/12 22:13	
Toluene-d8	99	70-130	4/17/12 22:13	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1430  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 21:07

**Sample Name:** OB36-DO  
**Lab Code:** R1202267-004

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUADATA\msvoa12\Data\041712\U7969.D\

**Analysis Lot:** 287761  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	11000	E	100	
79-01-6	Trichloroethene (TCE)	10000		100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	100	U	100	
156-59-2	cis-1,2-Dichloroethene	100	U	100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/17/12 21:07	
Dibromofluoromethane	100	70-130	4/17/12 21:07	
Toluene-d8	99	70-130	4/17/12 21:07	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1430  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 14:51

**Sample Name:** OB36-DO  
**Lab Code:** R1202267-004  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUADATA\msvoa12\Data\041812\U7999.D\

**Analysis Lot:** 287920  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	12000	D	200	
79-01-6	Trichloroethene (TCE)	9900	D	200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	200	U	200	
156-59-2	cis-1,2-Dichloroethene	200	U	200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/18/12 14:51	
Dibromofluoromethane	100	70-130	4/18/12 14:51	
Toluene-d8	99	70-130	4/18/12 14:51	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** OB37-DO  
**Lab Code:** R1202267-005

**Service Request:** R1202267  
**Date Collected:** 4/6/12 1445  
**Date Received:** 4/11/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Chloride	SM 4500-Cl- E	438	mg/L	20	20	NA	4/18/12 12:34	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** OB37-DO  
**Lab Code:** R1202267-005

**Service Request:** R1202267  
**Date Collected:** 4/6/12 1445  
**Date Received:** 4/11/12

**Basis:** NA

**Inorganic Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Iron, Dissolved	6010C	1500	U	µg/L	1500	3	4/16/12	4/20/12 05:09	
Manganese, Dissolved	6010C	3210000		µg/L	5000	100	4/16/12	4/20/12 00:25	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1445  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 16:10

**Sample Name:** OB37-DO  
**Lab Code:** R1202267-005

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUADATA\msvoa12\Data\041712\U7960.D\

**Analysis Lot:** 287761  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	14		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.8		2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	4/17/12 16:10	
Dibromofluoromethane	100	70-130	4/17/12 16:10	
Toluene-d8	99	70-130	4/17/12 16:10	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1240  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 17:16

**Sample Name:** CL11-S  
**Lab Code:** R1202267-006

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041712\U7962.D\

**Analysis Lot:** 287761  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	7.7		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	12		2.0	
79-01-6	Trichloroethene (TCE)	6.3		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	4/17/12 17:16	
Dibromofluoromethane	101	70-130	4/17/12 17:16	
Toluene-d8	97	70-130	4/17/12 17:16	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1250  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/13/12 14:53

**Sample Name:** CL11-DO  
**Lab Code:** R1202267-007

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\041312\Z1028.D\

**Analysis Lot:** 287359  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.3		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	9.5		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	12		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	5.9		2.0	
79-01-6	Trichloroethene (TCE)	44		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	4/13/12 14:53	
Dibromofluoromethane	99	70-130	4/13/12 14:53	
Toluene-d8	103	70-130	4/13/12 14:53	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1315  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/13/12 15:53

**Sample Name:** B-2  
**Lab Code:** R1202267-008

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\041312\Z1030.D\

**Analysis Lot:** 287359  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.5		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	6.9		2.0	
79-01-6	Trichloroethene (TCE)	260	E	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	260	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	3.8		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	4/13/12 15:53	
Dibromofluoromethane	101	70-130	4/13/12 15:53	
Toluene-d8	97	70-130	4/13/12 15:53	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1315  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 20:34

**Sample Name:** B-2  
**Lab Code:** R1202267-008  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUADATA\msvoa12\Data\041712\U7968.D\

**Analysis Lot:** 287761  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	7.2	D	4.0	
79-01-6	Trichloroethene (TCE)	270	D	4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	4.0	U	4.0	
156-59-2	cis-1,2-Dichloroethene	260	D	4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	4/17/12 20:34	
Dibromofluoromethane	100	70-130	4/17/12 20:34	
Toluene-d8	99	70-130	4/17/12 20:34	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** OB35-DO  
**Lab Code:** R1202267-009

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1400  
**Date Received:** 4/11/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Chloride	SM 4500-Cl- E	78.4	mg/L	1.0	1	NA	4/18/12 12:59	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** OB35-DO  
**Lab Code:** R1202267-009

**Service Request:** R1202267  
**Date Collected:** 4/6/12 1400  
**Date Received:** 4/11/12

**Basis:** NA

**Inorganic Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/16/12	4/19/12 09:11	
Manganese, Dissolved	6010C	28		µg/L	10	1	4/16/12	4/20/12 16:10	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1400  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 15:24

**Sample Name:** OB35-DO  
**Lab Code:** R1202267-009

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041812\U8000.D\

**Analysis Lot:** 287920  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	19000		200	
79-01-6	Trichloroethene (TCE)	5400		200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	200	U	200	
156-59-2	cis-1,2-Dichloroethene	790		200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	4/18/12 15:24	
Dibromofluoromethane	102	70-130	4/18/12 15:24	
Toluene-d8	99	70-130	4/18/12 15:24	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP27-DO  
**Lab Code:** R1202267-010

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1330  
**Date Received:** 4/11/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Chloride	SM 4500-Cl- E	450		mg/L	5.0	5	NA	4/18/12 13:03	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP27-DO  
**Lab Code:** R1202267-010

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1330  
**Date Received:** 4/11/12

**Basis:** NA

**Inorganic Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/16/12	4/19/12 09:16	
Manganese, Dissolved	6010C	53		µg/L	10	1	4/16/12	4/20/12 16:16	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1330  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/13/12 15:23

**Sample Name:** AP27-DO  
**Lab Code:** R1202267-010

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\041312\Z1029.D\

**Analysis Lot:** 287359  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	200	U	200	
79-01-6	Trichloroethene (TCE)	13000		200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	200	U	200	
156-59-2	cis-1,2-Dichloroethene	200	U	200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	4/13/12 15:23	
Dibromofluoromethane	100	70-130	4/13/12 15:23	
Toluene-d8	104	70-130	4/13/12 15:23	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1300  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 14:18

**Sample Name:** OB38-DO  
**Lab Code:** R1202267-011

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041812\U7998.D\

**Analysis Lot:** 287920  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	470		5.0	
79-01-6	Trichloroethene (TCE)	460		5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	150		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	6.7		5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/18/12 14:18	
Dibromofluoromethane	102	70-130	4/18/12 14:18	
Toluene-d8	99	70-130	4/18/12 14:18	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1015  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 21:40

**Sample Name:** MW-36  
**Lab Code:** R1202267-012

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041712\U7970.D\

**Analysis Lot:** 287761  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	750		20	
79-01-6	Trichloroethene (TCE)	1800		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	61		20	
156-59-2	cis-1,2-Dichloroethene	800		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/17/12 21:40	
Dibromofluoromethane	100	70-130	4/17/12 21:40	
Toluene-d8	101	70-130	4/17/12 21:40	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 0940  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 15:57

**Sample Name:** CL3-DO  
**Lab Code:** R1202267-013

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoal2\Data\041812\U8001.D\

**Analysis Lot:** 287920  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	35		20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	24		20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	5200	E	20	
79-01-6	Trichloroethene (TCE)	11000	E	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	290		20	
156-59-2	cis-1,2-Dichloroethene	5000	E	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	4/18/12 15:57	
Dibromofluoromethane	100	70-130	4/18/12 15:57	
Toluene-d8	99	70-130	4/18/12 15:57	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 0940  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/19/12 15:30

**Sample Name:** CL3-DO  
**Lab Code:** R1202267-013  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQU\DATA\msvoal2\Data\041912\U8043.D\

**Analysis Lot:** 288067  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	6000	D	200	
79-01-6	Trichloroethene (TCE)	15000	D	200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	420	D	200	
156-59-2	cis-1,2-Dichloroethene	6900	D	200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	4/19/12 15:30	
Dibromofluoromethane	102	70-130	4/19/12 15:30	
Toluene-d8	99	70-130	4/19/12 15:30	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 0950  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 13:12

**Sample Name:** CL3-S  
**Lab Code:** R1202267-014

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041812\U7996.D\

**Analysis Lot:** 287920  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	4.3		2.0	
79-01-6	Trichloroethene (TCE)	7.5		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	4/18/12 13:12	
Dibromofluoromethane	99	70-130	4/18/12 13:12	
Toluene-d8	99	70-130	4/18/12 13:12	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1325  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 13:45

**Sample Name:** Culvert Outfall  
**Lab Code:** R1202267-015

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041812\U7997.D\

**Analysis Lot:** 287920  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.1		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.9		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/18/12 13:45	
Dibromofluoromethane	100	70-130	4/18/12 13:45	
Toluene-d8	98	70-130	4/18/12 13:45	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 0900  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/13/12 16:53

**Sample Name:** STRHA-7A  
**Lab Code:** R1202267-016

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\041312\Z1032.D\

**Analysis Lot:** 287359  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	5.4		2.0	
79-01-6	Trichloroethene (TCE)	30		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	36		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	4/13/12 16:53	
Dibromofluoromethane	98	70-130	4/13/12 16:53	
Toluene-d8	97	70-130	4/13/12 16:53	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 0915  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/13/12 17:23

**Sample Name:** STRHA-7B  
**Lab Code:** R1202267-017

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\041312\Z1033.D\

**Analysis Lot:** 287359  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	3.7		2.0	
79-01-6	Trichloroethene (TCE)	19		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	7.1		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/13/12 17:23	
Dibromofluoromethane	105	70-130	4/13/12 17:23	
Toluene-d8	101	70-130	4/13/12 17:23	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1040  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 16:06

**Sample Name:** APB10-01  
**Lab Code:** R1202267-018

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5217.D\

**Analysis Lot:** 287516  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	8.4		5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	12		5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	24		5.0	
79-01-6	Trichloroethene (TCE)	76		5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	65		5.0	
156-59-2	cis-1,2-Dichloroethene	1000	E	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/17/12 16:06	
Dibromofluoromethane	96	70-130	4/17/12 16:06	
Toluene-d8	103	70-130	4/17/12 16:06	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1040  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 11:37

**Sample Name:** APB10-01  
**Lab Code:** R1202267-018  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041812\F5255.D\

**Analysis Lot:** 287903  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	23	D	20	
79-01-6	Trichloroethene (TCE)	77	D	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	71	D	20	
156-59-2	cis-1,2-Dichloroethene	1100	D	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	4/18/12 11:37	
Dibromofluoromethane	97	70-130	4/18/12 11:37	
Toluene-d8	103	70-130	4/18/12 11:37	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1215  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 16:34

**Sample Name:** P-19A  
**Lab Code:** R1202267-019

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5218.D\

**Analysis Lot:** 287516  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	5.4		4.0	
79-01-6	Trichloroethene (TCE)	30		4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	4.0	U	4.0	
156-59-2	cis-1,2-Dichloroethene	290		4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/17/12 16:34	
Dibromofluoromethane	98	70-130	4/17/12 16:34	
Toluene-d8	104	70-130	4/17/12 16:34	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1150  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 17:02

**Sample Name:** P-20R  
**Lab Code:** R1202267-020

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5219.D\

**Analysis Lot:** 287516  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/17/12 17:02	
Dibromofluoromethane	94	70-130	4/17/12 17:02	
Toluene-d8	101	70-130	4/17/12 17:02	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1110  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 17:29

**Sample Name:** OB20-S  
**Lab Code:** R1202267-021

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5220.D\

**Analysis Lot:** 287516  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl-Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/17/12 17:29	
Dibromofluoromethane	94	70-130	4/17/12 17:29	
Toluene-d8	101	70-130	4/17/12 17:29	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1120  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 12:05

**Sample Name:** OB20-DO  
**Lab Code:** R1202267-022

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041812\F5256.D\

**Analysis Lot:** 287903  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	70-130	4/18/12 12:05	
Dibromofluoromethane	97	70-130	4/18/12 12:05	
Toluene-d8	105	70-130	4/18/12 12:05	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1130  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 13:35

**Sample Name:** OB20-BR  
**Lab Code:** R1202267-023

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041812\F5259.D\

**Analysis Lot:** 287903  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	4.0	U	4.0	
79-01-6	Trichloroethene (TCE)	24		4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	4.0	U	4.0	
156-59-2	cis-1,2-Dichloroethene	190		4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/18/12 13:35	
Dibromofluoromethane	97	70-130	4/18/12 13:35	
Toluene-d8	105	70-130	4/18/12 13:35	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1050  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 18:52

**Sample Name:** OB21-DO  
**Lab Code:** R1202267-024

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5223.D\

**Analysis Lot:** 287516  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	220		20	
79-01-6	Trichloroethene (TCE)	1000		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	390		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	70-130	4/17/12 18:52	
Dibromofluoromethane	99	70-130	4/17/12 18:52	
Toluene-d8	107	70-130	4/17/12 18:52	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1100  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 14:03

**Sample Name:** OB21-BR  
**Lab Code:** R1202267-025

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041812\F5260.D\

**Analysis Lot:** 287903  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	10	U	10	
79-01-6	Trichloroethene (TCE)	10	U	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	490		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	70-130	4/18/12 14:03	
Dibromofluoromethane	98	70-130	4/18/12 14:03	
Toluene-d8	107	70-130	4/18/12 14:03	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1200  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 19:48

**Sample Name:** Stream ASCDS  
**Lab Code:** R1202267-026

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5225.D\

**Analysis Lot:** 287516  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	4.8		2.0	
79-01-6	Trichloroethene (TCE)	17		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	13		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/17/12 19:48	
Dibromofluoromethane	96	70-130	4/17/12 19:48	
Toluene-d8	101	70-130	4/17/12 19:48	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 0830  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 14:31

**Sample Name:** MW1-32 Tozer  
**Lab Code:** R1202267-027

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041812\F5261.D\

**Analysis Lot:** 287903  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	6.7		5.0	
79-01-6	Trichloroethene (TCE)	410		5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	98		5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/18/12 14:31	
Dibromofluoromethane	94	70-130	4/18/12 14:31	
Toluene-d8	103	70-130	4/18/12 14:31	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 0800  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 14:59

**Sample Name:** MW2-32 Tozer  
**Lab Code:** R1202267-028

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041812\F5262.D\

**Analysis Lot:** 287903  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	12000		200	
79-01-6	Trichloroethene (TCE)	1800		200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	200	U	200	
156-59-2	cis-1,2-Dichloroethene	3300		200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	4/18/12 14:59	
Dibromofluoromethane	94	70-130	4/18/12 14:59	
Toluene-d8	102	70-130	4/18/12 14:59	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 0845  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/17/12 21:11

**Sample Name:** MW3-32 Tozer  
**Lab Code:** R1202267-029

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5228.D\

**Analysis Lot:** 287516  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	4/17/12 21:11	
Dibromofluoromethane	96	70-130	4/17/12 21:11	
Toluene-d8	103	70-130	4/17/12 21:11	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1230  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 01:48

**Sample Name:** MW-33B  
**Lab Code:** R1202267-030

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5238.D\

**Analysis Lot:** 287768  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/18/12 01:48	
Dibromofluoromethane	96	70-130	4/18/12 01:48	
Toluene-d8	103	70-130	4/18/12 01:48	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 0730  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 02:16

**Sample Name:** CL10-DO  
**Lab Code:** R1202267-031

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5239.D\

**Analysis Lot:** 287768  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	3.4		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/18/12 02:16	
Dibromofluoromethane	97	70-130	4/18/12 02:16	
Toluene-d8	103	70-130	4/18/12 02:16	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 02:44

**Sample Name:** Trip Blank-5  
**Lab Code:** R1202267-032

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5240.D\

**Analysis Lot:** 287768  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/18/12 02:44	
Dibromofluoromethane	96	70-130	4/18/12 02:44	
Toluene-d8	102	70-130	4/18/12 02:44	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** 4/ 6/12 1600  
**Date Received:** 4/11/12  
**Date Analyzed:** 4/18/12 03:11

**Sample Name:** EB-4  
**Lab Code:** R1202267-033

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5241.D\

**Analysis Lot:** 287768  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/18/12 03:11	
Dibromofluoromethane	95	70-130	4/18/12 03:11	
Toluene-d8	101	70-130	4/18/12 03:11	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1202267-MB1

**Service Request:** R1202267  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

**General Chemistry Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	1.0	U	mg/L	1.0	1	NA	4/18/12 12:23	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1202267-MB2

**Service Request:** R1202267  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Chloride	SM 4500-Cl- E	1.0 U	mg/L	1.0	1	NA	4/18/12 12:46	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143267-05000000  
Sample Matrix: Water  
Sample Name: Method Blank  
Lab Code: R1202267-MB

Service Request: R1202267  
Date Collected: NA  
Date Received: NA  
Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/16/12	4/19/12 05:19	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	4/16/12	4/19/12 05:19	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/13/12 12:18

**Sample Name:** Method Blank  
**Lab Code:** RQ1203636-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\041312\Z1024.D\

**Analysis Lot:** 287359  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	4/13/12 12:18	
Dibromofluoromethane	100	70-130	4/13/12 12:18	
Toluene-d8	98	70-130	4/13/12 12:18	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/17/12 13:47

**Sample Name:** Method Blank  
**Lab Code:** RQ1203670-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5212.D\

**Analysis Lot:** 287516  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	4/17/12 13:47	
Dibromofluoromethane	99	70-130	4/17/12 13:47	
Toluene-d8	105	70-130	4/17/12 13:47	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/17/12 15:01

**Sample Name:** Method Blank  
**Lab Code:** RQ1203802-05

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041712\U7958.D\

**Analysis Lot:** 287761  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/17/12 15:01	
Dibromofluoromethane	100	70-130	4/17/12 15:01	
Toluene-d8	99	70-130	4/17/12 15:01	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/18/12 01:20

**Sample Name:** Method Blank  
**Lab Code:** RQ1203759-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041712\F5237.D\

**Analysis Lot:** 287768  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	4/18/12 01:20	
Dibromofluoromethane	97	70-130	4/18/12 01:20	
Toluene-d8	102	70-130	4/18/12 01:20	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/18/12 10:36

**Sample Name:** Method Blank  
**Lab Code:** RQ1203804-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\041812\F5253.D\

**Analysis Lot:** 287903  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	94	70-130	4/18/12 10:36	
Dibromofluoromethane	93	70-130	4/18/12 10:36	
Toluene-d8	101	70-130	4/18/12 10:36	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/18/12 12:40

**Sample Name:** Method Blank  
**Lab Code:** RQ1203887-04

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUATA\msvoa12\Data\041812\U7995.D\

**Analysis Lot:** 287920  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/18/12 12:40	
Dibromofluoromethane	101	70-130	4/18/12 12:40	
Toluene-d8	99	70-130	4/18/12 12:40	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/19/12 14:55

**Sample Name:** Method Blank  
**Lab Code:** RQ1203981-05

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\041912\U8042.D\

**Analysis Lot:** 288067  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/19/12 14:55	
Dibromofluoromethane	99	70-130	4/19/12 14:55	
Toluene-d8	99	70-130	4/19/12 14:55	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143267-05000000  
Sample Matrix: Water

Service Request: R1202267

Date Analyzed: 4/18/12

Lab Control Sample Summary  
General Chemistry Parameters

Units: mg/L

Basis: NA

Lab Control Sample

R1202267-LCS1

Analyte Name	Method	Result	Spike Amount	% Rec	% Rec Limits
Chloride	SM 4500-Cl- E	24.8	25.0	99	86 - 110

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143267-05000000  
Sample Matrix: Water

Service Request: R1202267  
Date Analyzed: 4/18/12

Lab Control Sample Summary  
General Chemistry Parameters

Units: mg/L  
Basis: NA

Analyte Name	Method	Lab Control Sample R1202267-LCS2			% Rec Limits
		Result	Spike Amount	% Rec	
Chloride	SM 4500-Cl- E	24.6	25.0	99	86 - 110

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

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QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/143267-05000000  
Sample Matrix: Water

Service Request: R1202267  
Date Analyzed: 4/19/12

Lab Control Sample Summary  
Inorganic Parameters

Units: µg/L

Basis: NA

Analyte Name	Method	Lab Control Sample R1202267-LCS			% Rec Limits
		Result	Spike Amount	% Rec	
Iron, Dissolved	6010C	1040	1000	104	80 - 120
Manganese, Dissolved	6010C	501	500	100	80 - 120

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

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QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Analyzed:** 4/13/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 287359

Analyte Name	Lab Control Sample RQ1203636-04			Duplicate Lab Control Sample RQ1203636-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	19.9	20.0	100	19.6	20.0	98	70 - 130	2	20
1,1,2,2-Tetrachloroethane	19.4	20.0	97	18.7	20.0	94	70 - 130	4	20
1,1,2-Trichloroethane	19.1	20.0	95	18.4	20.0	92	70 - 130	4	20
1,1-Dichloroethane (1,1-DCA)	20.1	20.0	101	20.2	20.0	101	70 - 130	<1	20
1,1-Dichloroethene (1,1-DCE)	21.0	20.0	105	22.1	20.0	110	70 - 130	5	20
1,2-Dichloroethane	17.8	20.0	89	19.2	20.0	96	70 - 130	7	20
1,2-Dichloropropane	19.4	20.0	97	19.9	20.0	99	70 - 130	2	20
Acetone	20.2	20.0	101	16.7	20.0	83	40 - 160	19	20
Bromodichloromethane	19.3	20.0	96	19.2	20.0	96	70 - 130	<1	20
Bromoform	17.6	20.0	88	17.0	20.0	85	70 - 130	4	20
Bromomethane	16.3	20.0	81	15.0	20.0	75	40 - 160	8	20
Carbon Tetrachloride	18.1	20.0	91	18.3	20.0	92	70 - 130	1	20
Chlorobenzene	19.0	20.0	95	19.0	20.0	95	70 - 130	<1	20
Chloroethane	21.5	20.0	108	21.2	20.0	106	70 - 130	2	20
Chloroform	20.3	20.0	102	19.9	20.0	99	70 - 130	2	20
Chloromethane	23.2	20.0	116	23.0	20.0	115	40 - 160	<1	20
Dibromochloromethane	19.4	20.0	97	18.3	20.0	91	70 - 130	6	20
Methylene Chloride	18.8	20.0	94	18.6	20.0	93	70 - 130	<1	20
Tetrachloroethene (PCE)	18.6	20.0	93	18.2	20.0	91	70 - 130	2	20
Trichloroethene (TCE)	18.8	20.0	94	19.7	20.0	99	70 - 130	4	20
Trichlorofluoromethane (CFC 11)	19.3	20.0	97	19.8	20.0	99	70 - 130	2	20
Vinyl Chloride	20.7	20.0	104	20.7	20.0	104	70 - 130	<1	20
cis-1,2-Dichloroethene	21.4	20.0	107	21.0	20.0	105	70 - 130	2	20
cis-1,3-Dichloropropene	17.5	20.0	88	18.0	20.0	90	70 - 130	3	20
trans-1,2-Dichloroethene	19.8	20.0	99	19.7	20.0	99	70 - 130	<1	20
trans-1,3-Dichloropropene	16.9	20.0	85	16.9	20.0	84	70 - 130	<1	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Analyzed:** 4/17/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 287516

Analyte Name	Lab Control Sample RQ1203670-04			Duplicate Lab Control Sample RQ1203670-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	17.2	20.0	86	16.2	20.0	81	70 - 130	6	20
1,1,2,2-Tetrachloroethane	18.0	20.0	90	17.9	20.0	90	70 - 130	<1	20
1,1,2-Trichloroethane	16.5	20.0	82	16.5	20.0	82	70 - 130	<1	20
1,1-Dichloroethane (1,1-DCA)	18.1	20.0	90	17.5	20.0	88	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	20.5	20.0	103	19.7	20.0	99	70 - 130	4	20
1,2-Dichloroethane	14.9	20.0	75	14.9	20.0	75	70 - 130	<1	20
1,2-Dichloropropane	16.1	20.0	80	16.2	20.0	81	70 - 130	<1	20
Acetone	16.6	20.0	83	20.3	20.0	102	40 - 160	20	20
Bromodichloromethane	16.1	20.0	80	15.7	20.0	79	70 - 130	2	20
Bromoform	18.1	20.0	90	18.2	20.0	91	70 - 130	<1	20
Bromomethane	23.4	20.0	117	21.7	20.0	109	40 - 160	7	20
Carbon Tetrachloride	16.0	20.0	80	15.0	20.0	75	70 - 130	7	20
Chlorobenzene	17.8	20.0	89	17.4	20.0	87	70 - 130	2	20
Chloroethane	19.5	20.0	97	19.0	20.0	95	70 - 130	3	20
Chloroform	17.6	20.0	88	17.0	20.0	85	70 - 130	4	20
Chloromethane	22.6	20.0	113	21.3	20.0	106	40 - 160	6	20
Dibromochloromethane	17.0	20.0	85	17.3	20.0	87	70 - 130	2	20
Methylene Chloride	18.0	20.0	90	17.7	20.0	89	70 - 130	2	20
Tetrachloroethene (PCE)	16.8	20.0	84	16.2	20.0	81	70 - 130	3	20
Trichloroethene (TCE)	16.3	20.0	81	15.8	20.0	79	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	17.8	20.0	89	16.9	20.0	85	70 - 130	5	20
Vinyl Chloride	20.3	20.0	102	19.6	20.0	98	70 - 130	4	20
cis-1,2-Dichloroethene	18.9	20.0	95	18.5	20.0	93	70 - 130	2	20
cis-1,3-Dichloropropene	14.9	20.0	74	14.2	20.0	71	70 - 130	5	20
trans-1,2-Dichloroethene	19.2	20.0	96	18.6	20.0	93	70 - 130	3	20
trans-1,3-Dichloropropene	14.9	20.0	74	14.7	20.0	74	70 - 130	1	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Analyzed:** 4/17/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 287761

Analyte Name	Lab Control Sample RQ1203802-03			Duplicate Lab Control Sample RQ1203802-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	21.9	20.0	109	21.8	20.0	109	70 - 130	<1	20
1,1,2,2-Tetrachloroethane	19.7	20.0	99	20.0	20.0	100	70 - 130	1	20
1,1,2-Trichloroethane	20.8	20.0	104	20.6	20.0	103	70 - 130	1	20
1,1-Dichloroethane (1,1-DCA)	22.1	20.0	110	21.7	20.0	109	70 - 130	2	20
1,1-Dichloroethene (1,1-DCE)	22.6	20.0	113	22.8	20.0	114	70 - 130	1	20
1,2-Dichloroethane	21.4	20.0	107	21.2	20.0	106	70 - 130	1	20
1,2-Dichloropropane	21.9	20.0	109	21.4	20.0	107	70 - 130	2	20
Acetone	17.8	20.0	89	18.8	20.0	94	40 - 160	6	20
Bromodichloromethane	21.8	20.0	109	21.5	20.0	108	70 - 130	1	20
Bromoform	21.0	20.0	105	21.8	20.0	109	70 - 130	4	20
Bromomethane	20.4	20.0	102	20.5	20.0	102	40 - 160	<1	20
Carbon Tetrachloride	23.0	20.0	115	22.4	20.0	112	70 - 130	3	20
Chlorobenzene	22.4	20.0	112	21.7	20.0	108	70 - 130	3	20
Chloroethane	22.5	20.0	112	22.0	20.0	110	70 - 130	2	20
Chloroform	21.9	20.0	110	21.4	20.0	107	70 - 130	3	20
Chloromethane	22.5	20.0	113	22.0	20.0	110	40 - 160	2	20
Dibromochloromethane	23.3	20.0	116	23.0	20.0	115	70 - 130	1	20
Methylene Chloride	21.1	20.0	105	20.9	20.0	104	70 - 130	1	20
Tetrachloroethene (PCE)	22.5	20.0	113	22.1	20.0	110	70 - 130	2	20
Trichloroethene (TCE)	21.8	20.0	109	21.2	20.0	106	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	22.0	20.0	110	21.9	20.0	110	70 - 130	<1	20
Vinyl Chloride	22.6	20.0	113	23.2	20.0	116	70 - 130	3	20
cis-1,2-Dichloroethene	22.0	20.0	110	22.1	20.0	110	70 - 130	<1	20
cis-1,3-Dichloropropene	21.4	20.0	107	21.1	20.0	105	70 - 130	2	20
trans-1,2-Dichloroethene	21.8	20.0	109	20.9	20.0	104	70 - 130	4	20
trans-1,3-Dichloropropene	21.2	20.0	106	20.7	20.0	104	70 - 130	2	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Analyzed:** 4/17/12 -  
 4/18/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 287768

Analyte Name	Lab Control Sample RQ1203759-04			Duplicate Lab Control Sample RQ1203759-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	16.9	20.0	84	16.6	20.0	83	70 - 130	2	20
1,1,2,2-Tetrachloroethane	18.6	20.0	93	18.2	20.0	91	70 - 130	3	20
1,1,2-Trichloroethane	17.7	20.0	89	17.8	20.0	89	70 - 130	<1	20
1,1-Dichloroethane (1,1-DCA)	18.9	20.0	94	18.2	20.0	91	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	21.2	20.0	106	20.9	20.0	104	70 - 130	2	20
1,2-Dichloroethane	15.5	20.0	77	15.2	20.0	76	70 - 130	2	20
1,2-Dichloropropane	17.7	20.0	89	16.8	20.0	84	70 - 130	6	20
Acetone	21.8	20.0	109	22.0	20.0	110	40 - 160	<1	20
Bromodichloromethane	16.5	20.0	82	16.4	20.0	82	70 - 130	<1	20
Bromoform	19.7	20.0	99	19.3	20.0	97	70 - 130	2	20
Bromomethane	23.2	20.0	116	22.5	20.0	113	40 - 160	3	20
Carbon Tetrachloride	16.0	20.0	80	16.0	20.0	80	70 - 130	<1	20
Chlorobenzene	18.6	20.0	93	18.6	20.0	93	70 - 130	<1	20
Chloroethane	20.4	20.0	102	19.7	20.0	98	70 - 130	4	20
Chloroform	17.5	20.0	88	17.3	20.0	86	70 - 130	2	20
Chloromethane	22.7	20.0	113	22.7	20.0	113	40 - 160	<1	20
Dibromochloromethane	18.3	20.0	91	18.2	20.0	91	70 - 130	<1	20
Methylene Chloride	18.7	20.0	93	18.4	20.0	92	70 - 130	1	20
Tetrachloroethene (PCE)	17.1	20.0	85	16.9	20.0	84	70 - 130	1	20
Trichloroethene (TCE)	18.3	20.0	91	17.5	20.0	88	70 - 130	4	20
Trichlorofluoromethane (CFC 11)	18.1	20.0	90	17.1	20.0	86	70 - 130	5	20
Vinyl Chloride	21.1	20.0	105	20.7	20.0	103	70 - 130	2	20
cis-1,2-Dichloroethene	19.6	20.0	98	18.7	20.0	94	70 - 130	4	20
cis-1,3-Dichloropropene	15.1	20.0	76	14.8	20.0	74	70 - 130	2	20
trans-1,2-Dichloroethene	19.5	20.0	97	19.1	20.0	95	70 - 130	2	20
trans-1,3-Dichloropropene	15.3	20.0	76	15.2	20.0	76	70 - 130	<1	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Analyzed:** 4/18/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 287903

Analyte Name	Lab Control Sample RQ1203804-04			Duplicate Lab Control Sample RQ1203804-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	17.9	20.0	89	16.8	20.0	84	70 - 130	6	20
1,1,2,2-Tetrachloroethane	20.1	20.0	101	20.3	20.0	101	70 - 130	<1	20
1,1,2-Trichloroethane	18.0	20.0	90	18.2	20.0	91	70 - 130	1	20
1,1-Dichloroethane (1,1-DCA)	19.6	20.0	98	18.8	20.0	94	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	22.7	20.0	113	21.3	20.0	106	70 - 130	6	20
1,2-Dichloroethane	15.3	20.0	77	15.2	20.0	76	70 - 130	<1	20
1,2-Dichloropropane	17.7	20.0	89	17.5	20.0	88	70 - 130	1	20
Acetone	20.2	20.0	101	21.8	20.0	109	40 - 160	8	20
Bromodichloromethane	16.9	20.0	84	16.4	20.0	82	70 - 130	3	20
Bromoform	20.1	20.0	100	20.2	20.0	101	70 - 130	<1	20
Bromomethane	24.3	20.0	122	22.4	20.0	112	40 - 160	8	20
Carbon Tetrachloride	16.6	20.0	83	15.7	20.0	79	70 - 130	5	20
Chlorobenzene	19.1	20.0	95	18.8	20.0	94	70 - 130	1	20
Chloroethane	21.4	20.0	107	20.2	20.0	101	70 - 130	6	20
Chloroform	18.6	20.0	93	17.6	20.0	88	70 - 130	6	20
Chloromethane	24.1	20.0	120	22.9	20.0	115	40 - 160	5	20
Dibromochloromethane	18.6	20.0	93	18.6	20.0	93	70 - 130	<1	20
Methylene Chloride	19.5	20.0	97	19.0	20.0	95	70 - 130	2	20
Tetrachloroethene (PCE)	18.1	20.0	91	17.4	20.0	87	70 - 130	4	20
Trichloroethene (TCE)	17.7	20.0	89	16.9	20.0	84	70 - 130	5	20
Trichlorofluoromethane (CFC 11)	18.8	20.0	94	17.7	20.0	89	70 - 130	6	20
Vinyl Chloride	22.6	20.0	113	20.2	20.0	101	70 - 130	11	20
cis-1,2-Dichloroethene	20.6	20.0	103	19.2	20.0	96	70 - 130	7	20
cis-1,3-Dichloropropene	15.8	20.0	79	15.5	20.0	78	70 - 130	2	20
trans-1,2-Dichloroethene	20.6	20.0	103	19.5	20.0	98	70 - 130	5	20
trans-1,3-Dichloropropene	15.9	20.0	79	16.1	20.0	81	70 - 130	2	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Analyzed:** 4/18/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 287920

Analyte Name	Lab Control Sample RQ1203887-02			Duplicate Lab Control Sample RQ1203887-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	20.6	20.0	103	20.4	20.0	102	70 - 130	<1	20
1,1,2,2-Tetrachloroethane	18.9	20.0	94	18.6	20.0	93	70 - 130	1	20
1,1,2-Trichloroethane	19.2	20.0	96	19.2	20.0	96	70 - 130	<1	20
1,1-Dichloroethane (1,1-DCA)	20.4	20.0	102	20.0	20.0	100	70 - 130	2	20
1,1-Dichloroethene (1,1-DCE)	21.3	20.0	106	20.3	20.0	101	70 - 130	5	20
1,2-Dichloroethane	19.8	20.0	99	19.4	20.0	97	70 - 130	2	20
1,2-Dichloropropane	19.6	20.0	98	19.5	20.0	97	70 - 130	<1	20
Acetone	18.5	20.0	93	18.6	20.0	93	40 - 160	<1	20
Bromodichloromethane	19.8	20.0	99	19.5	20.0	97	70 - 130	2	20
Bromoform	20.1	20.0	101	20.1	20.0	101	70 - 130	<1	20
Bromomethane	19.6	20.0	98	18.8	20.0	94	40 - 160	4	20
Carbon Tetrachloride	22.0	20.0	110	21.0	20.0	105	70 - 130	5	20
Chlorobenzene	19.9	20.0	99	19.2	20.0	96	70 - 130	3	20
Chloroethane	19.9	20.0	100	20.9	20.0	105	70 - 130	5	20
Chloroform	20.7	20.0	104	20.3	20.0	101	70 - 130	2	20
Chloromethane	20.3	20.0	102	20.2	20.0	101	40 - 160	<1	20
Dibromochloromethane	20.8	20.0	104	20.2	20.0	101	70 - 130	3	20
Methylene Chloride	19.3	20.0	97	19.2	20.0	96	70 - 130	<1	20
Tetrachloroethene (PCE)	19.7	20.0	99	19.7	20.0	99	70 - 130	<1	20
Trichloroethene (TCE)	19.9	20.0	100	19.0	20.0	95	70 - 130	5	20
Trichlorofluoromethane (CFC 11)	20.8	20.0	104	20.9	20.0	104	70 - 130	<1	20
Vinyl Chloride	20.7	20.0	104	20.6	20.0	103	70 - 130	<1	20
cis-1,2-Dichloroethene	20.5	20.0	102	20.1	20.0	101	70 - 130	2	20
cis-1,3-Dichloropropene	19.3	20.0	96	18.7	20.0	94	70 - 130	3	20
trans-1,2-Dichloroethene	20.3	20.0	102	19.6	20.0	98	70 - 130	4	20
trans-1,3-Dichloropropene	19.4	20.0	97	18.8	20.0	94	70 - 130	3	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

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QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202267  
**Date Analyzed:** 4/19/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 288067

Analyte Name	Lab Control Sample RQ1203981-03			Duplicate Lab Control Sample RQ1203981-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	23.9	20.0	120	24.2	20.0	121	70 - 130	1	20
1,1,2,2-Tetrachloroethane	20.2	20.0	101	19.8	20.0	99	70 - 130	2	20
1,1,2-Trichloroethane	21.5	20.0	107	21.1	20.0	105	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	22.9	20.0	114	23.5	20.0	118	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	24.0	20.0	120	24.1	20.0	121	70 - 130	<1	20
1,2-Dichloroethane	22.4	20.0	112	21.6	20.0	108	70 - 130	4	20
1,2-Dichloropropane	22.4	20.0	112	22.0	20.0	110	70 - 130	2	20
Acetone	18.5	20.0	93	18.1	20.0	90	40 - 160	3	20
Bromodichloromethane	22.6	20.0	113	22.6	20.0	113	70 - 130	<1	20
Bromoform	22.2	20.0	111	21.5	20.0	108	70 - 130	3	20
Bromomethane	23.4	20.0	117	22.3	20.0	112	40 - 160	5	20
Carbon Tetrachloride	25.2	20.0	126	25.8	20.0	129	70 - 130	2	20
Chlorobenzene	22.2	20.0	111	22.5	20.0	112	70 - 130	1	20
Chloroethane	23.9	20.0	120	24.2	20.0	121	70 - 130	1	20
Chloroform	23.0	20.0	115	23.5	20.0	117	70 - 130	2	20
Chloromethane	23.0	20.0	115	23.0	20.0	115	40 - 160	<1	20
Dibromochloromethane	23.3	20.0	117	23.0	20.0	115	70 - 130	1	20
Methylene Chloride	21.3	20.0	106	22.1	20.0	111	70 - 130	4	20
Tetrachloroethene (PCE)	22.4	20.0	112	22.3	20.0	112	70 - 130	<1	20
Trichloroethene (TCE)	22.9	20.0	114	22.4	20.0	112	70 - 130	2	20
Trichlorofluoromethane (CFC 11)	23.9	20.0	119	24.0	20.0	120	70 - 130	<1	20
Vinyl Chloride	24.2	20.0	121	23.9	20.0	119	70 - 130	1	20
cis-1,2-Dichloroethene	23.5	20.0	118	24.0	20.0	120	70 - 130	2	20
cis-1,3-Dichloropropene	22.0	20.0	110	22.0	20.0	110	70 - 130	<1	20
trans-1,2-Dichloroethene	23.1	20.0	115	23.2	20.0	116	70 - 130	<1	20
trans-1,3-Dichloropropene	21.8	20.0	109	21.5	20.0	108	70 - 130	1	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

<b>Project Name</b> Varian Beverly <b>Project Manager</b> Raymond Cadorette <b>Company/Address</b> Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072 <b>Phone #</b> 617-589-6102 <b>E-mail</b> Raymond.Cadorette@Shawgrp.com <b>Sampler's Signature</b> <i>Raymond Cadorette</i> <b>Sampler's Printed Name</b> Raymond Cadorette		<b>Project Number</b> 143267-05000000 <b>Report CC</b> 1		<b>ANALYSIS REQUESTED (Include Method Number and Container Preservative)</b> METALS, TOTAL (List in comments below) <input checked="" type="checkbox"/> METALS, DISSOLVED (List in comments below) <input checked="" type="checkbox"/> PCBs <input type="checkbox"/> 8082 <input type="checkbox"/> 608 PESTICIDES <input type="checkbox"/> 8081 <input type="checkbox"/> 608 GC VOAs <input type="checkbox"/> 8021 <input type="checkbox"/> 601/602 GC/MS SVOAs <input type="checkbox"/> 8270 <input type="checkbox"/> 625 GC/MS VOAs <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 617/157 GC/MS SVOAs <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> 617/157		<b>PRESERVATIVE</b> 210 Chloride		<b>REMARKS/ALTERNATE DESCRIPTION</b> Site specific VOC list	
<b>CLIENT SAMPLE ID</b> 0B10-BR AP12-BR 0B27-BR 0B36-DO 0B37-DO CL11-S CL11-DO B-2 0B35-DO AP27-DO		<b>FOR OFFICE USE ONLY</b> <b>LAB ID</b> 3 5 5 3 5 3 3 5 5		<b>SAMPLING DATE</b> 4-6-12 4-6-12 4-6-12 4-6-12 4-6-12 4-6-12 4-6-12 4-6-12 4-6-12 4-6-12		<b>TIME</b> 1350 1415 1300 1430 1445 1240 1250 1315 1400 1330		<b>MATRIX</b> GW                 	
<b>SPECIAL INSTRUCTIONS/COMMENTS</b> Metals = Field Filtered Site specific VOC list Massachusetts CAM analyses reporting and QA/QC. Email GISKey formatted EDD and PDF of report to: Catherine.Mainville@Shawgrp.com.		<b>TURNAROUND REQUIREMENTS</b> RUSH (SURCHARGES APPLY) 1 day <input type="checkbox"/> 2 day <input type="checkbox"/> 3 day <input type="checkbox"/> 4 day <input type="checkbox"/> 5 day <input type="checkbox"/> <input checked="" type="checkbox"/> Standard		<b>REPORT REQUIREMENTS</b> I. Results Only <input type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input type="checkbox"/> III. Results + QC and Calibration Summaries <input type="checkbox"/> IV. Data Validation Report with Raw Data <input type="checkbox"/>		<b>INVOICE INFORMATION</b> PO #: BILL TO: Shaw Environmental		Edata <input type="checkbox"/> Yes <input type="checkbox"/> Relinquished <input type="checkbox"/>	
See QAPP <input type="checkbox"/> STATE WHERE SAMPLES WERE COLLECTED:		RECEIVED BY Signature: <i>Vallerie Sasso</i> Printed Name: Vallerie Sasso Firm: Shaw		RECEIVED BY Signature: <i>Ann Jesta</i> Printed Name: Ann Jesta Firm: Hentschke		R1202267 Shaw Environmental & Infrastructure, Inc. Varian Beverly 7 Y 		Signature Printed Name Firm Date/Time	
Signature: <i>Raymond Cadorette</i> Printed Name: Raymond Cadorette Firm: Shaw Date/Time: 4-6-12 16:30		Signature: <i>Vallerie Sasso</i> Printed Name: Vallerie Sasso Firm: Shaw Date/Time: 4-6-12 15:00		Signature: <i>Ann Jesta</i> Printed Name: Ann Jesta Firm: Hentschke Date/Time: 4-12-0850		Distribution: White - Lab Copy; Yellow - Return To Originator to UPS		SCOC Rev. 10/2010	

Project Name <b>Varian Beverly</b>		Project Number <b>143267-05000000</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>Raymond Cadorette</b>		Report CC			
Company/Address <b>Shaw Environmental, Inc.</b>					
100 Technology Center Drive					
Stoughton, MA 02072					
Phone #	E-mail				
617-589-6102	Raymond.Cadorette@Shawgrp.com				
Sampler's Signature <i>Raymond Cadorette</i>	Sampler's Printed Name <b>Raymond Cadorette</b>				
	Sampler's E-mail <i>rcadoret@shaw.com</i>				
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	TIME	MATRIX	NUMBER OF CONTAINERS
OB38-DO		4-6-12	1300	GW	3
MW-36		4-6-12	1015		3
CL3-DO		4-6-12	940		3
CL3-S		4-6-12	950		3
Culvert outfall		4-6-12	1325		3
STRA-7A		4-6-12	900		3
STRA-7B		4-6-12	915		3
APB10-01		4-6-12	1040		3
P-19A		4-6-12	1215		3
P-20R		4-6-12	1150		3

PRESERVATIVE		PRELIMINARY RESULTS	
GC/MS VOAs <input checked="" type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> CLP GC/MS SVOAs <input type="checkbox"/> 8270 <input type="checkbox"/> 625 GC VOAs <input type="checkbox"/> 8021 <input type="checkbox"/> 601/602 PESTICIDES <input type="checkbox"/> 8081 <input type="checkbox"/> 608 PCBs <input type="checkbox"/> 8082 <input type="checkbox"/> 608 METALS, TOTAL (List in comments below) METALS, DISSOLVED (List in comments below) EPR 8260 Site specific VOC list Chloride		METALS, TOTAL (List in comments below) METALS, DISSOLVED (List in comments below) EPR 8260 Site specific VOC list Chloride	
Preservative Key 0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn, Acetate 6. MeOH 7. NaHSO4 8. Other _____		REMARKS/ALTERNATE DESCRIPTION	

SPECIAL INSTRUCTIONS/COMMENTS Metals = Field filtered Site specific VOC list Massachusetts CAM analyses reporting and QA/QC. Email GISKey formatted EDD and PDF of report to: Catherine.Mainville@Shawgrp.com		TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day _____ 2 day _____ 3 day _____ 4 day _____ 5 day _____ <input checked="" type="checkbox"/> Standard		REPORT REQUIREMENTS I. Results Only _____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required) _____ III. Results + QC and Calibration Summaries _____ IV. Data Validation Report with Raw Data _____ Edata Yes _____ No _____		INVOICE INFORMATION PO #: BILL TO: <b>Shaw Environmental</b>	
See QAPP <input type="checkbox"/>		REQUESTED REPORT DATE		RECEIVED BY		RECEIVED BY	
STATE WHERE SAMPLES WERE COLLECTED:		RELINQUISHED BY		RELINQUISHED BY		RELINQUISHED BY	
Signature <i>Raymond Cadorette</i>	Signature <i>Michelle Sasso</i>	Signature <i>Michelle Sasso</i>	Signature <i>Amy Hentschke</i>	Signature <i>Amy Hentschke</i>	Signature	Signature	Signature
Printed Name <b>Raymond Cadorette</b>	Printed Name <b>Michelle Sasso</b>	Printed Name <b>Michelle Sasso</b>	Printed Name <b>Amy Hentschke</b>	Printed Name <b>Amy Hentschke</b>	Printed Name	Printed Name	Printed Name
Firm <b>Shaw</b>	Firm <b>Shaw</b>	Firm <b>Shaw</b>	Firm <b>Shaw</b>	Firm <b>Shaw</b>	Firm	Firm	Firm
Date/Time 4-6-12 1630	Date/Time 4-6-12 16:30	Date/Time 4-6-12 15:00	Date/Time 4-6-12 15:00	Date/Time 4-6-12 0850	Date/Time	Date/Time	Date/Time

Project Name <b>Varian Beverly</b>		Project Number <b>143267-05000000</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)			
Project Manager <b>Raymond Cadorette</b>		Report CC		PRESERVATIVE			
Company Address <b>Shaw Environmental, Inc.</b>				NUMBER OF CONTAINERS			
100 Technology Center Drive							
Stoughton, MA 02072							
Phone #	617-589-6102	E-mail	Raymond.Cadorette@Shawgrp.com				
Sampler's Signature	<i>Clark Mudgett</i>	Sampler's Printed Name	Ashin Mudgett				
CLIENT SAMPLE ID	FOR OFFICE USE ONLY	LAB ID	SAMPLING DATE	TIME	MATRIX		
OB20-S			4-6-12	1110	GW		
OB20-DO			4-6-12	1120			
OB20-BR			4-6-12	1130			
OB21-DO			4-6-12	1050			
OB21-BR			4-6-12	1100			
Stream ASCDS			4-6-12	1200			
MW1-32 Tozer			4-6-12	830			
MW2-32 Tozer			4-6-12	800			
MW3-32 Tozer			4-6-12	845			
MW-33B			4-6-12	1230			
SPECIAL INSTRUCTIONS/COMMENTS Metals = Field filtered Site specific VOC list Massachusetts CAM analyses reporting and QA/QC. Email GISKey formatted EDD and PDF of report to: Catherine.Mainville@Shawgrp.com.							
TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day ___ 2 day ___ 3 day ___ 4 day ___ 5 day ___ Standard <input checked="" type="checkbox"/>		REPORT REQUIREMENTS I. Results Only ___ II. Results + QC Summaries (LCS, DUP, MSMSD as required) ___ III. Results + QC and Calibration Summaries ___ IV. Data Validation Report with Raw Data ___		INVOICE INFORMATION PO #: ___ BILL TO: <b>Shaw Environmental</b>			
Requested Report Date		Relinquished By		Received By			
Signature: <i>Clark Mudgett</i>		Signature: <i>Tadui Sasso</i>		Signature: <i>Amy J. Kistler</i>			
Printed Name: <b>Clark Mudgett</b>		Printed Name: <b>Tadui Sasso</b>		Printed Name: <b>Amy J. Kistler</b>			
Firm: <b>Shaw</b>		Firm: <b>Shaw</b>		Firm: <b>Shaw</b>			
Date/Time: <b>4-6-12 1630</b>		Date/Time: <b>4-6-12 1630</b>		Date/Time: <b>4-10-12 15:00</b>			
RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY	
Signature		Signature		Signature		Signature	
Printed Name		Printed Name		Printed Name		Printed Name	
Firm		Firm		Firm		Firm	
Date/Time		Date/Time		Date/Time		Date/Time	



Project Name <b>Varian Beverly</b>		Project Number <b>143267-050000000</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>Raymond Cadorette</b>		Report CC			
Company/Address <b>Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072</b>					
Phone # <b>617-589-6102</b>		E-mail <b>Raymond.Cadorette@Shawgrp.com</b>			
Sampler's Signature <i>Carol Mignani</i>		Sampler's Printed Name <b>Ashta Mignani</b>			
FOR OFFICE USE ONLY		SAMPLING DATE		MATRIX	
CLIENT SAMPLE ID <b>CL10-D0</b>	LAB ID	DATE <b>4-6-12</b>	TIME <b>0730</b>	GW	
<b>Top Blank .5</b>		<b>ponced by hb</b>			
<b>EB-4</b>		<b>4-6-12</b>	<b>1600</b>		
SPECIAL INSTRUCTIONS/COMMENTS <b>Metals = Field Filtered Site Specific VOC List Massachusetts CAM analyses reporting and QA/QC. Email GISKey formatted EDD and PDF of report to: Catherine.Mainville@Shawgrp.com.</b>					
TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day ___ 2 day ___ 3 day ___ 4 day ___ 5 day ___ <input checked="" type="checkbox"/> Standard		REPORT REQUIREMENTS I. Results Only ___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required) ___ III. Results + QC and Calibration Summaries ___ IV. Data Validation Report with Raw Data ___		INVOICE INFORMATION PO #: _____ BILL TO: <b>Shaw Environmental</b>	
REQUESTED REPORT DATE		RELINQUISHED BY		RECEIVED BY	
Signature: <i>[Signature]</i>		Signature: <i>[Signature]</i>		Signature: <i>[Signature]</i>	
Printed Name: <b>Shaw</b>		Printed Name: <b>Valerie Sasso</b>		Printed Name: <b>Valerie Sasso</b>	
Firm: <b>Shaw</b>		Firm: <b>Shaw</b>		Firm: <b>Shaw</b>	
Date/Time: <b>4-6-12 16:30</b>		Date/Time: <b>4-7-12 15:00</b>		Date/Time: <b>4/11/12 0850</b>	
DISTRIBUTION: White - Lab Copy; Yellow - Return To Originator					



# Cooler Receipt and Preservation Check Form

Project/Client Shaw

Folder Number B12-2267

Cooler received on 4/11/12 by: AJH COURIER: ALS  UPS FEDEX VELOCITY CLIENT

- Were custody seals on outside of cooler?  YES NO
- Were custody papers properly filled out (ink, signed, etc.)?  YES NO
- Did all bottles arrive in good condition (unbroken)?  YES NO
- Did VOA vials, Alkalinity, or Sulfide have significant\* air bubbles?  YES\* NO N/A
- Were Ice or Ice packs present?  YES NO
- Where did the bottles originate? ALS/ROC, CLIENT
- Temperature of cooler(s) upon receipt: 8.2°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below  No No No No No

Date/Time Temperatures Taken: 4/11/12 0911

Thermometer ID: IR GUN#3 /  IR GUN#4 Reading From:  Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition & Client Approval to Run Samples:

All Samples held in storage location	<u>R-002</u>	by <u>AJH</u>	on <u>4/11/12</u>	at <u>0917</u>
5035 samples placed in storage location		by	on	at

PC Secondary Review: MP 4/21/12

Cooler Breakdown: Date: 4/11/12 Time: 1249 by: AJH

- Were all bottle labels complete (i.e. analysis, preservation, etc.)?  YES NO
- Did all bottle labels and tags agree with custody papers?  YES NO
- Were correct containers used for the tests indicated?  YES NO
- Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated  N/A

Explain any discrepancies:

pH	Reagent	YES NO		Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
		YES	NO						
≥12	NaOH								
≤2	HNO <sub>3</sub>		X	BDB03119F	3/13	AP-12-BR	1ml	BDB03119F	42
≤2	H <sub>2</sub> SO <sub>4</sub>								
<4	NaHSO <sub>4</sub>								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*	4111060	3/13				

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust:

Bottle lot numbers: 1-315-002, 031212-2K

Other Comments:

\* AP-12-BR(80') - all 3 vials w/ bubbles

\* OB-37-DO(—) - 1 vial w/ very large bubble

PC Secondary Review: MP 4/24/12  
H:ASMODCS\Cooler Receipt 5.doc

\*significant air bubbles: VOA > 5-6 mm ; WC > 1 in. diameter

## Data Usability Worksheet

**Project Name :** Varian Medical Systems, Inc  
**Prepared By:** Dale Dailey  
**Analyte Group :** Volatile Organics  
Volatile Organics  
Chloride  
Metals (Fe & Mn)

**Job Number :** 143267-05000000  
**Date :** 6/13/2012  
**Analytical Method :** EPA Method 8260C  
EPA Method 624  
EPA Method SM 4500-CL-E  
EPA Method 6010C

**Completed MADEP CAM Certification Form included:** Yes  
**Laboratory ID No. :** R1202418

**Chain of Custody included in Data Package ?** Yes  
**Is it Complete ?** Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
4/17/2012	VOC 8260C		14 days	4/19, 4/23/2012
4/17/2012	VOC 624		14 days	4/19/12
4/17/2012	Chloride EPA Method SM 4500-CL-E		28 days	4/26/2012
4/17/2012	Dissolved iron and manganese 6010C		6 months	4/23, 4/26/2012

**Sample temperature within QC limits:** Yes

### Surrogate Recovery

Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

### MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

### Laboratory Control Samples

Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: NA

**Equipment Field Blank ID : N/A** N/A  
**Trip Blank ID : Trip Blank (R1202418-006)** 4/18/2012

**Method Blank:** VOC 8260C 4/19, 4/23/2012  
VOC 624 4/19/2012  
Chloride EPA Method SM 4500-CL-E 4/26/2012  
Dissolved iron and manganese 6010C 4/23/2012

**Were any compounds identified in the method blank, field blank or trip blank above detection limits ?** No

**If so, list Sample ID/Compound/Concentration/Units:** NA

### Notes:

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the methods. Samples AP31-DO (88), AP32-DO (88), and OB26-BR (95), were reanalyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

**Reviewed By:** Pernilla Haley



April 30, 2012

Service Request No: R1202418

Mr. Ray Cadorette  
Shaw Environmental & Infrastructure, Inc.  
100 Technology Center  
Stoughton, MA 02072

**Laboratory Results for: Varian Beverly/143267-05000000**

Dear Mr. Cadorette:

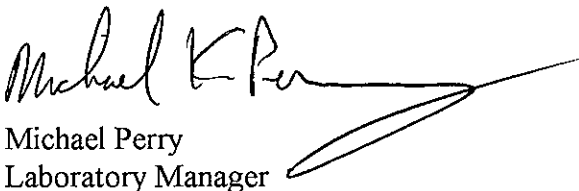
Enclosed are the results of the sample(s) submitted to our laboratory on April 18, 2012. For your reference, these analyses have been assigned our service request number **R1202418**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc. dba ALS Environmental**

  
Michael Perry  
Laboratory Manager



ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623  
PHONE 585-288-5380 | FAX 585-288-8475  
Columbia Analytical Services, Inc.  
Part of the ALS Group A Campbell Brothers Limited Company

## COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** Shaw Environmental, Inc  
**Project:** Varian Beverly  
**Sample Matrix:** Water

**Service Request No.:** R1202418  
**Project Number:** 143267-05000000  
**Date Received:** 4/18/12

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II, deliverables with Massachusetts CAM analyses reporting. When appropriate to the method, method blank results have been reported with each analytical test.

#### Sample Receipt

Water samples were collected on 4/17/12 and received at CAS in good condition at a cooler temperature of 5.1 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and CAS Job #.

#### Volatile Organics

Five water samples were analyzed for a site list of Volatile Organics by SW-846 Method 8260C and one water sample was analyzed for the PPL list of Volatile Organics by EPA method 624.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples AP31-DO (88), AP32-DO (88), and OB26-BR (95) were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes.

All Surrogate Standard recoveries were within QC limits.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

All samples were analyzed within the required holding time of 14 days.

No other analytical or QC problems were encountered with these analyses.

**Inorganic Analyses**

Three water samples were analyzed for dissolved Iron and dissolved Manganese by SW-846 method 6010B and for Chloride by method SM 4500-CL-E.

The initial and continuing calibration criteria were met for all analytes.

All Blank Spike (LCS) recoveries were within QC limits.

No analytical or QC problems were encountered.

## MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc.

Project #: 143267-05000000

Project Location: Varian Beverly

RTN:

**This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):**  
R1202418 - 001 - 006

Matrices:  Groundwater  Soil/Sediment  Drinking Water  Air  Other: \_\_\_\_\_

**CAM Protocol** (check all that apply below):

8260 VOC CAM II A <input checked="" type="checkbox"/>	7470/7471 Hg CAM III B <input type="checkbox"/>	MassDEP VPH CAM IV A <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex-Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>
6010 Metals CAM III A <input checked="" type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	8082 PCB CAM V A <input type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6850 Perchlorate CAM VIII B <input type="checkbox"/>	Other: CL by SM4500

**Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes <input type="checkbox"/> No
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes <input type="checkbox"/> No
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes <input type="checkbox"/> No
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes <input type="checkbox"/> No
<b>E</b>	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes <input type="checkbox"/> No

**Responses to Questions G, H and I below are required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes <input type="checkbox"/> No <sup>1</sup>
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**Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40.1056 (2)(k) and WSC-07-350.

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	X Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup>All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Michael K. Perry

Position: Laboratory Manager

Printed Name: Michael K. Perry

Date: 4/30/12 00004

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R1202418

<u>Lab ID</u>	<u>Client ID</u>
R1202418-001	AP30R-DO (88)
R1202418-002	AP31-DO (88)
R1202418-003	AP32-DO (88)
R1202418-004	OB26-BR (95)
R1202418-005	Boiler Room Sump
R1202418-006	Trip Blank



## REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
- H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.



### **CAS/Rochester Lab ID # for Massachusetts Certification**

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

*The Commonwealth of Massachusetts*



*Department of Environmental Protection*

*Division of Environmental Analysis  
Senator William X. Wall Experiment Station*

*certifies*

M-NY032

COLUMBIA ANALYTICAL SERVICES  
1565 JEFFERSON RD  
BUILDING 300, SUITE 360  
ROCHESTER, NY 14623-0000

*Laboratory Director:* Michael K. Perry

*for the analysis of* NON POTABLE WATER (CHEMISTRY)

*pursuant to 310 CMR 42.00*

*This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.*

*This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.*

*Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.*

A handwritten signature in cursive script, reading "Oscar C. Parcarolo".

*Director, Division of Environmental Analysis*

*Issued:* 01 JUL 2011

*Expires:* 30 JUN 2012

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)	Effective Date	25 AUG 2011	Expiration Date	30 JUN 2012
<u>Analytes</u>			<u>Methods</u>	
ALUMINUM			EPA 200.7	
ANTIMONY			EPA 200.7	
ANTIMONY			EPA 200.8	
ARSENIC			EPA 200.7	
ARSENIC			EPA 200.8	
BERYLLIUM			EPA 200.7	
BERYLLIUM			EPA 200.8	
CADMIUM			EPA 200.7	
CADMIUM			EPA 200.8	
CHROMIUM			EPA 200.7	
CHROMIUM			EPA 200.8	
COBALT			EPA 200.7	
COBALT			EPA 200.8	
COPPER			EPA 200.7	
COPPER			EPA 200.8	
IRON			EPA 200.7	
LEAD			EPA 200.7	
LEAD			EPA 200.8	
MANGANESE			EPA 200.7	
MANGANESE			EPA 200.8	
MERCURY			EPA 245.1	
MOLYBDENUM			EPA 200.7	
MOLYBDENUM			EPA 200.8	
NICKEL			EPA 200.7	
NICKEL			EPA 200.8	
SELENIUM			EPA 200.7	
SELENIUM			EPA 200.8	
SILVER			EPA 200.7	
SILVER			EPA 200.8	
THALLIUM			EPA 200.7	
THALLIUM			EPA 200.8	
VANADIUM			EPA 200.7	
VANADIUM			EPA 200.8	
ZINC			EPA 200.7	
ZINC			EPA 200.8	
PH			SM 4500-H-8	
SPECIFIC CONDUCTIVITY			EPA 120.1	
TOTAL DISSOLVED SOLIDS			SM 2540C	
HARDNESS (CACO3), TOTAL			SM 2340C	
CALCIUM			EPA 200.7	
MAGNESIUM			EPA 200.7	
SODIUM			EPA 200.7	
POTASSIUM			EPA 200.7	

August 24, 2011

\*= Provisional Certification

Page 1 of 2

000008

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 25 AUG 2011 Expiration Date 30 JUN 2012

<u>Analytes</u>	<u>Methods</u>
ALKALINITY, TOTAL	SM 2320B
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP30R-DO (88)  
**Lab Code:** R1202418-001

**Service Request:** R1202418  
**Date Collected:** 4/17/12 0940  
**Date Received:** 4/18/12

**Basis:** NA

**General Chemistry Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl- E	1070		mg/L	50	50	NA	4/26/12 15:10	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP30R-DO (88)  
**Lab Code:** R1202418-001

**Service Request:** R1202418  
**Date Collected:** 4/17/12 0940  
**Date Received:** 4/18/12

**Basis:** NA

**Inorganic Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Iron, Dissolved	6010C	5000	U	µg/L	5000	10	4/19/12	4/26/12 15:01	
Manganese, Dissolved	6010C	6450000		µg/L	50000	1000	4/19/12	4/26/12 14:49	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** 4/17/12 0940  
**Date Received:** 4/18/12  
**Date Analyzed:** 4/19/12 20:17

**Sample Name:** AP30R-DO (88)  
**Lab Code:** R1202418-001

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\041912\Z1155.D\

**Analysis Lot:** 288079  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	220		10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	700		10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	270		10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	10	U	10	
79-01-6	Trichloroethene (TCE)	10	U	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	10	U	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	70-130	4/19/12 20:17	
Dibromofluoromethane	100	70-130	4/19/12 20:17	
Toluene-d8	101	70-130	4/19/12 20:17	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP31-DO (88)  
**Lab Code:** R1202418-002

**Service Request:** R1202418  
**Date Collected:** 4/17/12 1020  
**Date Received:** 4/18/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Chloride	SM 4500-Cl- E	2650	mg/L	40	40	NA	4/26/12 15:07	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP31-DO (88)  
**Lab Code:** R1202418-002

**Service Request:** R1202418  
**Date Collected:** 4/17/12 1020  
**Date Received:** 4/18/12

**Basis:** NA

**Inorganic Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/19/12	4/23/12 23:53	
Manganese, Dissolved	6010C	576		µg/L	10	1	4/19/12	4/23/12 23:53	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** 4/17/12 1020  
**Date Received:** 4/18/12  
**Date Analyzed:** 4/19/12 20:47

**Sample Name:** AP31-DO (88)  
**Lab Code:** R1202418-002

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\041912\Z1156.D\

**Analysis Lot:** 288079  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1300		40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	160		40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	45		40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	270		40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	1700		40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	1900		40	
79-01-6	Trichloroethene (TCE)	37000	E	40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	40	U	40	
156-59-2	cis-1,2-Dichloroethene	40	U	40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/19/12 20:47	
Dibromofluoromethane	101	70-130	4/19/12 20:47	
Toluene-d8	100	70-130	4/19/12 20:47	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** 4/17/12 1020  
**Date Received:** 4/18/12  
**Date Analyzed:** 4/23/12 14:00

**Sample Name:** AP31-DO (88)  
**Lab Code:** R1202418-002  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\042312\Z1168.D\

**Analysis Lot:** 288465  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 250

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1200	D	500	
79-34-5	1,1,2,2-Tetrachloroethane	500	U	500	
79-00-5	1,1,2-Trichloroethane	500	U	500	
75-34-3	1,1-Dichloroethane (1,1-DCA)	500	U	500	
75-35-4	1,1-Dichloroethene (1,1-DCE)	500	U	500	
107-06-2	1,2-Dichloroethane	500	U	500	
78-87-5	1,2-Dichloropropane	500	U	500	
67-64-1	Acetone	2500	U	2500	
75-27-4	Bromodichloromethane	500	U	500	
75-25-2	Bromoform	500	U	500	
74-83-9	Bromomethane	500	U	500	
56-23-5	Carbon Tetrachloride	500	U	500	
108-90-7	Chlorobenzene	500	U	500	
75-00-3	Chloroethane	500	U	500	
67-66-3	Chloroform	1500	D	500	
74-87-3	Chloromethane	500	U	500	
124-48-1	Dibromochloromethane	500	U	500	
75-09-2	Methylene Chloride	500	U	500	
127-18-4	Tetrachloroethene (PCE)	1800	D	500	
79-01-6	Trichloroethene (TCE)	43000	D	500	
75-69-4	Trichlorofluoromethane (CFC 11)	500	U	500	
75-01-4	Vinyl Chloride	500	U	500	
156-59-2	cis-1,2-Dichloroethene	500	U	500	
10061-01-5	cis-1,3-Dichloropropene	500	U	500	
156-60-5	trans-1,2-Dichloroethene	500	U	500	
10061-02-6	trans-1,3-Dichloropropene	500	U	500	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	108	70-130	4/23/12 14:00	
Dibromofluoromethane	102	70-130	4/23/12 14:00	
Toluene-d8	102	70-130	4/23/12 14:00	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP32-DO (88)  
**Lab Code:** R1202418-003

**Service Request:** R1202418  
**Date Collected:** 4/17/12 1100  
**Date Received:** 4/18/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Chloride	SM 4500-Cl- E	631		mg/L	10	10	NA	4/26/12 15:11	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** AP32-DO (88)  
**Lab Code:** R1202418-003

**Service Request:** R1202418  
**Date Collected:** 4/17/12 1100  
**Date Received:** 4/18/12

**Basis:** NA

**Inorganic Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/19/12	4/23/12 23:59	
Manganese, Dissolved	6010C	72		µg/L	10	1	4/19/12	4/23/12 23:59	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** 4/17/12 1100  
**Date Received:** 4/18/12  
**Date Analyzed:** 4/19/12 21:17

**Sample Name:** AP32-DO (88)  
**Lab Code:** R1202418-003

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\041912\Z1157.D\

**Analysis Lot:** 288079  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1400	100	
79-34-5	1,1,2,2-Tetrachloroethane	100 U	100	
79-00-5	1,1,2-Trichloroethane	100 U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100 U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100 U	100	
107-06-2	1,2-Dichloroethane	100 U	100	
78-87-5	1,2-Dichloropropane	100 U	100	
67-64-1	Acetone	500 U	500	
75-27-4	Bromodichloromethane	100 U	100	
75-25-2	Bromoform	100 U	100	
74-83-9	Bromomethane	100 U	100	
56-23-5	Carbon Tetrachloride	550	100	
108-90-7	Chlorobenzene	100 U	100	
75-00-3	Chloroethane	100 U	100	
67-66-3	Chloroform	2400	100	
74-87-3	Chloromethane	100 U	100	
124-48-1	Dibromochloromethane	100 U	100	
75-09-2	Methylene Chloride	100 U	100	
127-18-4	Tetrachloroethene (PCE)	57000 E	100	
79-01-6	Trichloroethene (TCE)	110000 E	100	
75-69-4	Trichlorofluoromethane (CFC 11)	100 U	100	
75-01-4	Vinyl Chloride	100 U	100	
156-59-2	cis-1,2-Dichloroethene	100 U	100	
10061-01-5	cis-1,3-Dichloropropene	100 U	100	
156-60-5	trans-1,2-Dichloroethene	100 U	100	
10061-02-6	trans-1,3-Dichloropropene	100 U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	4/19/12 21:17	
Dibromofluoromethane	103	70-130	4/19/12 21:17	
Toluene-d8	99	70-130	4/19/12 21:17	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** 4/17/12 1100  
**Date Received:** 4/18/12  
**Date Analyzed:** 4/23/12 14:36

**Sample Name:** AP32-DO (88)  
**Lab Code:** R1202418-003  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\042312\Z1169.D\

**Analysis Lot:** 288465  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 1000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2000	U	2000	
79-34-5	1,1,2,2-Tetrachloroethane	2000	U	2000	
79-00-5	1,1,2-Trichloroethane	2000	U	2000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2000	U	2000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2000	U	2000	
107-06-2	1,2-Dichloroethane	2000	U	2000	
78-87-5	1,2-Dichloropropane	2000	U	2000	
67-64-1	Acetone	10000	U	10000	
75-27-4	Bromodichloromethane	2000	U	2000	
75-25-2	Bromoform	2000	U	2000	
74-83-9	Bromomethane	2000	U	2000	
56-23-5	Carbon Tetrachloride	2000	U	2000	
108-90-7	Chlorobenzene	2000	U	2000	
75-00-3	Chloroethane	2000	U	2000	
67-66-3	Chloroform	2500	D	2000	
74-87-3	Chloromethane	2000	U	2000	
124-48-1	Dibromochloromethane	2000	U	2000	
75-09-2	Methylene Chloride	2000	U	2000	
127-18-4	Tetrachloroethene (PCE)	62000	D	2000	
79-01-6	Trichloroethene (TCE)	140000	D	2000	
75-69-4	Trichlorofluoromethane (CFC 11)	2000	U	2000	
75-01-4	Vinyl Chloride	2000	U	2000	
156-59-2	cis-1,2-Dichloroethene	2000	U	2000	
10061-01-5	cis-1,3-Dichloropropene	2000	U	2000	
156-60-5	trans-1,2-Dichloroethene	2000	U	2000	
10061-02-6	trans-1,3-Dichloropropene	2000	U	2000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	70-130	4/23/12 14:36	
Dibromofluoromethane	99	70-130	4/23/12 14:36	
Toluene-d8	100	70-130	4/23/12 14:36	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** 4/17/12 1120  
**Date Received:** 4/18/12  
**Date Analyzed:** 4/19/12 19:47

**Sample Name:** OB26-BR (95)  
**Lab Code:** R1202418-004

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\041912\Z1154.D\

**Analysis Lot:** 288079  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	11		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	3.9		2.0	
79-01-6	Trichloroethene (TCE)	31		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	11		2.0	
156-59-2	cis-1,2-Dichloroethene	270	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	4/19/12 19:47	
Dibromofluoromethane	98	70-130	4/19/12 19:47	
Toluene-d8	101	70-130	4/19/12 19:47	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** 4/17/12 1120  
**Date Received:** 4/18/12  
**Date Analyzed:** 4/23/12 13:30

**Sample Name:** OB26-BR (95)  
**Lab Code:** R1202418-004  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\042312\Z1167.DA

**Analysis Lot:** 288465  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	4.0	U	4.0	
79-01-6	Trichloroethene (TCE)	30	D	4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	11	D	4.0	
156-59-2	cis-1,2-Dichloroethene	280	D	4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	4/23/12 13:30	
Dibromofluoromethane	100	70-130	4/23/12 13:30	
Toluene-d8	105	70-130	4/23/12 13:30	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** 4/17/12 1200  
**Date Received:** 4/18/12  
**Date Analyzed:** 4/19/12 20:57

**Sample Name:** Boiler Room Sump  
**Lab Code:** R1202418-005

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 624  
**Data File Name:** J:\ACQUDATA\MSVOA5\DATA\041912\K3189.D\

**Analysis Lot:** 288142  
**Instrument Name:** R-MS-05  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	
107-02-8	Acrolein	10	U	10	
107-13-1	Acrylonitrile	10	U	10	
71-43-2	Benzene	1.0	U	1.0	
75-27-4	Bromodichloromethane	1.0	U	1.0	
75-25-2	Bromoform	1.0	U	1.0	
74-83-9	Bromomethane	1.0	U	1.0	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	
108-90-7	Chlorobenzene	1.0	U	1.0	
75-00-3	Chloroethane	1.0	U	1.0	
67-66-3	Chloroform	1.4		1.0	
74-87-3	Chloromethane	1.0	U	1.0	
124-48-1	Dibromochloromethane	1.0	U	1.0	
75-09-2	Methylene Chloride	1.0	U	1.0	
100-41-4	Ethylbenzene	1.0	U	1.0	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	
108-88-3	Toluene	1.0	U	1.0	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	
75-01-4	Vinyl Chloride	1.0	U	1.0	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** 4/17/12 1200  
**Date Received:** 4/18/12  
**Date Analyzed:** 4/19/12 20:57

**Sample Name:** Boiler Room Sump  
**Lab Code:** R1202418-005

**Units:** Percent  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 624  
**Data File Name:** J:\ACQDATA\MSVOAS\DATA\041912\K3189.D\

**Analysis Lot:** 288142  
**Instrument Name:** R-MS-05  
**Dilution Factor:** 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	79-123	4/19/12 20:57	
4-Bromofluorobenzene	86	79-119	4/19/12 20:57	
Toluene-d8	97	83-120	4/19/12 20:57	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** 4/17/12 1430  
**Date Received:** 4/18/12  
**Date Analyzed:** 4/23/12 13:00

**Sample Name:** Trip Blank  
**Lab Code:** R1202418-006

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\042312\Z1166.D\

**Analysis Lot:** 288465  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	4/23/12 13:00	
Dibromofluoromethane	102	70-130	4/23/12 13:00	
Toluene-d8	102	70-130	4/23/12 13:00	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1202418-MB

**Service Request:** R1202418  
**Date Collected:** NA  
**Date Received:** NA  
**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Chloride	SM 4500-Cl- E	1.0	U	mg/L	1.0	1	NA	4/26/12 15:05	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1202418-MB

**Service Request:** R1202418  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

**Inorganic Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/19/12	4/23/12 21:24	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	4/19/12	4/23/12 21:24	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/19/12 15:43

**Sample Name:** Method Blank  
**Lab Code:** RQ1203896-04

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 624  
**Data File Name:** J:\ACQUDATA\MSVOA5\DATA\041912\K3181.D\

**Analysis Lot:** 288142  
**Instrument Name:** R-MS-05  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	
107-02-8	Acrolein	10	U	10	
107-13-1	Acrylonitrile	10	U	10	
71-43-2	Benzene	1.0	U	1.0	
75-27-4	Bromodichloromethane	1.0	U	1.0	
75-25-2	Bromoform	1.0	U	1.0	
74-83-9	Bromomethane	1.0	U	1.0	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	
108-90-7	Chlorobenzene	1.0	U	1.0	
75-00-3	Chloroethane	1.0	U	1.0	
67-66-3	Chloroform	1.0	U	1.0	
74-87-3	Chloromethane	1.0	U	1.0	
124-48-1	Dibromochloromethane	1.0	U	1.0	
75-09-2	Methylene Chloride	1.0	U	1.0	
100-41-4	Ethylbenzene	1.0	U	1.0	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	
108-88-3	Toluene	1.0	U	1.0	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	
75-01-4	Vinyl Chloride	1.0	U	1.0	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/19/12 15:43

**Sample Name:** Method Blank  
**Lab Code:** RQ1203896-04

**Units:** Percent  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 624  
**Data File Name:** J:\ACQUDATA\MSVOA5\DATA\041912\K3181.D\

**Analysis Lot:** 288142  
**Instrument Name:** R-MS-05  
**Dilution Factor:** 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	79-123	4/19/12 15:43	
4-Bromofluorobenzene	89	79-119	4/19/12 15:43	
Toluene-d8	98	83-120	4/19/12 15:43	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/19/12 11:40

**Sample Name:** Method Blank  
**Lab Code:** RQ1203969-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\041912\Z1138.D\

**Analysis Lot:** 288079  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	4/19/12 11:40	
Dibromofluoromethane	102	70-130	4/19/12 11:40	
Toluene-d8	99	70-130	4/19/12 11:40	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 4/23/12 12:30

**Sample Name:** Method Blank  
**Lab Code:** RQ1204009-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA6\DATA\042312\Z1165.D\

**Analysis Lot:** 288465  
**Instrument Name:** R-MS-06  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	4/23/12 12:30	
Dibromofluoromethane	99	70-130	4/23/12 12:30	
Toluene-d8	99	70-130	4/23/12 12:30	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Analyzed:** 4/26/12

**Lab Control Sample Summary  
General Chemistry Parameters**

**Units:** mg/L  
**Basis:** NA

Analyte Name	Method	Lab Control Sample			% Rec Limits
		Result	Spike Amount	% Rec	
Chloride	SM 4500-Cl- E	24.1	25.0	96	86 - 110

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Analyzed:** 4/23/12

**Lab Control Sample Summary  
Inorganic Parameters**

**Units:** µg/L

**Basis:** NA

Analyte Name	Method	Lab Control Sample R1202418-LCS			% Rec Limits
		Result	Spike Amount	% Rec	
Iron, Dissolved	6010C	1000	1000	100	80 - 120
Manganese, Dissolved	6010C	496	500	99	80 - 120

Results flagged with an asterisk (\*) indicate values outside control criteria.

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Analyzed:** 4/19/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 624

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 288142

**Lab Control Sample  
 RQ1203896-03**

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	21.4	20.0	107	52 - 162
1,1,2,2-Tetrachloroethane	17.0	20.0	85	46 - 157
1,1,2-Trichloroethane	17.4	20.0	87	52 - 150
1,1-Dichloroethane (1,1-DCA)	23.0	20.0	115	59 - 155
1,1-Dichloroethene (1,1-DCE)	22.5	20.0	112	0 - 234
1,2-Dichloroethane	20.0	20.0	100	49 - 155
1,2-Dichloropropane	20.3	20.0	102	0 - 210
2-Chloroethyl Vinyl Ether	21.2	20.0	106	0 - 305
Acrolein	72.8	100	73	10 - 174
Acrylonitrile	95.8	100	96	61 - 141
Benzene	19.6	20.0	98	37 - 151
Bromodichloromethane	19.2	20.0	96	35 - 155
Bromoform	16.2	20.0	81	45 - 169
Bromomethane	19.8	20.0	99	0 - 242
Carbon Tetrachloride	20.0	20.0	100	70 - 140
Chlorobenzene	19.7	20.0	99	37 - 160
Chloroethane	23.4	20.0	117	14 - 230
Chloroform	20.9	20.0	104	51 - 138
Chloromethane	24.4	20.0	122	0 - 273
Dibromochloromethane	17.9	20.0	90	53 - 149
Methylene Chloride	20.9	20.0	104	0 - 221
Ethylbenzene	19.6	20.0	98	37 - 162
Tetrachloroethene (PCE)	19.2	20.0	96	64 - 148
Toluene	19.4	20.0	97	47 - 150
Trichloroethene (TCE)	18.7	20.0	94	71 - 157
Trichlorofluoromethane (CFC 11)	21.7	20.0	108	17 - 181
Vinyl Chloride	23.5	20.0	117	0 - 251
cis-1,2-Dichloroethene	21.2	20.0	106	75 - 124
cis-1,3-Dichloropropene	17.3	20.0	87	0 - 227
trans-1,2-Dichloroethene	22.1	20.0	111	54 - 156
trans-1,3-Dichloropropene	17.6	20.0	88	17 - 183

Results flagged with an asterisk (\*) indicate values outside control criteria.

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Analyzed:** 4/19/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 288079

Analyte Name	Lab Control Sample RQ1203969-04			Duplicate Lab Control Sample RQ1203969-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	21.3	20.0	107	21.0	20.0	105	70 - 130	1	20
1,1,2,2-Tetrachloroethane	19.2	20.0	96	20.3	20.0	101	70 - 130	5	20
1,1,2-Trichloroethane	20.1	20.0	100	20.5	20.0	103	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	21.9	20.0	110	21.9	20.0	109	70 - 130	<1	20
1,1-Dichloroethene (1,1-DCE)	22.7	20.0	113	22.7	20.0	114	70 - 130	<1	20
1,2-Dichloroethane	19.4	20.0	97	20.7	20.0	104	70 - 130	7	20
1,2-Dichloropropane	20.8	20.0	104	20.6	20.0	103	70 - 130	<1	20
Acetone	20.7	20.0	104	21.7	20.0	108	40 - 160	4	20
Bromodichloromethane	19.8	20.0	99	20.6	20.0	103	70 - 130	4	20
Bromoform	19.2	20.0	96	19.2	20.0	96	70 - 130	<1	20
Bromomethane	17.4	20.0	87	16.4	20.0	82	40 - 160	6	20
Carbon Tetrachloride	19.1	20.0	95	18.9	20.0	94	70 - 130	<1	20
Chlorobenzene	19.4	20.0	97	19.2	20.0	96	70 - 130	1	20
Chloroethane	21.9	20.0	110	23.2	20.0	116	70 - 130	5	20
Chloroform	21.7	20.0	109	22.0	20.0	110	70 - 130	1	20
Chloromethane	25.6	20.0	128	25.6	20.0	128	40 - 160	<1	20
Dibromochloromethane	20.6	20.0	103	20.1	20.0	100	70 - 130	2	20
Methylene Chloride	20.8	20.0	104	20.0	20.0	100	70 - 130	4	20
Tetrachloroethene (PCE)	19.9	20.0	100	19.7	20.0	98	70 - 130	1	20
Trichloroethene (TCE)	19.4	20.0	97	20.1	20.0	101	70 - 130	4	20
Trichlorofluoromethane (CFC 11)	21.2	20.0	106	20.8	20.0	104	70 - 130	2	20
Vinyl Chloride	22.6	20.0	113	22.3	20.0	112	70 - 130	1	20
cis-1,2-Dichloroethene	22.7	20.0	114	22.9	20.0	114	70 - 130	<1	20
cis-1,3-Dichloropropene	19.2	20.0	96	18.7	20.0	93	70 - 130	3	20
trans-1,2-Dichloroethene	21.5	20.0	107	20.8	20.0	104	70 - 130	3	20
trans-1,3-Dichloropropene	19.0	20.0	95	18.4	20.0	92	70 - 130	3	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/143267-05000000  
**Sample Matrix:** Water

**Service Request:** R1202418  
**Date Analyzed:** 4/23/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 288465

Analyte Name	Lab Control Sample RQ1204009-04			Duplicate Lab Control Sample RQ1204009-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	23.7	20.0	118	24.3	20.0	121	70 - 130	3	20
1,1,2,2-Tetrachloroethane	21.3	20.0	107	21.0	20.0	105	70 - 130	1	20
1,1,2-Trichloroethane	23.9	20.0	120	23.3	20.0	117	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	24.6	20.0	123	24.5	20.0	122	70 - 130	<1	20
1,1-Dichloroethene (1,1-DCE)	25.5	20.0	127	25.1	20.0	126	70 - 130	1	20
1,2-Dichloroethane	22.6	20.0	113	21.9	20.0	109	70 - 130	4	20
1,2-Dichloropropane	23.7	20.0	118	22.4	20.0	112	70 - 130	6	20
Acetone	24.0	20.0	120	24.7	20.0	124	40 - 160	3	20
Bromodichloromethane	22.9	20.0	114	22.5	20.0	113	70 - 130	1	20
Bromoform	20.8	20.0	104	20.9	20.0	104	70 - 130	<1	20
Bromomethane	18.6	20.0	93	19.3	20.0	96	40 - 160	4	20
Carbon Tetrachloride	21.4	20.0	107	20.7	20.0	104	70 - 130	3	20
Chlorobenzene	20.3	20.0	101	19.9	20.0	100	70 - 130	2	20
Chloroethane	25.3	20.0	126	25.4	20.0	127	70 - 130	<1	20
Chloroform	23.6	20.0	118	23.8	20.0	119	70 - 130	<1	20
Chloromethane	27.3	20.0	137	28.7	20.0	143	40 - 160	5	20
Dibromochloromethane	21.7	20.0	109	21.6	20.0	108	70 - 130	<1	20
Methylene Chloride	22.4	20.0	112	22.1	20.0	110	70 - 130	2	20
Tetrachloroethene (PCE)	19.5	20.0	97	19.9	20.0	100	70 - 130	2	20
Trichloroethene (TCE)	22.5	20.0	113	21.4	20.0	107	70 - 130	5	20
Trichlorofluoromethane (CFC 11)	23.0	20.0	115	23.7	20.0	119	70 - 130	3	20
Vinyl Chloride	24.0	20.0	120	24.6	20.0	123	70 - 130	3	20
cis-1,2-Dichloroethene	24.2	20.0	121	24.3	20.0	122	70 - 130	<1	20
cis-1,3-Dichloropropene	21.3	20.0	107	21.5	20.0	108	70 - 130	1	20
trans-1,2-Dichloroethene	24.1	20.0	121	23.8	20.0	119	70 - 130	1	20
trans-1,3-Dichloropropene	21.6	20.0	108	20.7	20.0	104	70 - 130	4	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Project Name <b>Varian Beverly</b>		Project Number <b>143267-05</b>		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager <b>Raymond Cadorette</b>		Report CC		PRESERVATIVE <b>1</b>	
Company/Address <b>Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072</b>		E-mail <b>Raymond.Cadorette@Shawgrp.com</b>		PRELIMINARY ANALYSIS <b>20</b>	
Phone # <b>617-589-6102</b>		Sample's Printed Name <b>Lead check</b>		REMARKS/ ALTERNATE DESCRIPTION	
Sample's Signature <i>Lead check</i>		Sampler's Printed Name <b>Lead check</b>		Preservative Key 0. NONE 1. HCL 2. HNO <sub>3</sub> 3. H <sub>2</sub> SO <sub>4</sub> 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO <sub>4</sub> 8. Other	
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	TIME	MATRIX	NUMBER OF CONTAINERS
AP30R-DO (88)		4-17-12	0940	GW	5
AP31-DO (88)		↓	1030	↓	5
AP32-DO (88)		↓	1100	↓	5
DR. 26-RE (95)		↓	1120	↓	3
Boiler Room Sample		↓	1200	↓	3
Trip Blank		3-26-12	1430	lab	3
<p>SPECIAL INSTRUCTIONS/COMMENTS  <b>Metals = Fe &amp; Mn are field filtered</b>  <b>Site specific VOC list</b>  <b>Massachusetts CAM analyses reporting and QA/QC.</b>  <b>Email GISKey formatted EDD &amp; PDF of report to:</b>  <b>Catherine.Mainville@Shawgrp.com</b></p>					
TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day ___ 2 day ___ 3 day ___ 4 day ___ 5 day ___ <input checked="" type="checkbox"/> Standard		REPORT REQUIREMENTS I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data		INVOICE INFORMATION PO #: <b>771944</b> BILL TO:	
REQUESTED REPORT DATE		RECEIVED BY		RECEIVED BY	
Signature		Signature		Signature	
Printed Name		Printed Name		Printed Name	
Firm		Firm		Firm	
Date/Time		Date/Time		Date/Time	
4-17-12 1200		4/18/12 0855		4/18/12 0855	
RELINQUISHED BY		RELINQUISHED BY		RELINQUISHED BY	
Signature		Signature		Signature	
Printed Name		Printed Name		Printed Name	
Firm		Firm		Firm	
Date/Time		Date/Time		Date/Time	
4-17-12 1200		4/18/12 0855		4/18/12 0855	

Edata  Yes

**R1202418**  
Shaw Environmental & Infrastructure, Inc.  
Varian Beverly







# Cooler Receipt and Preservation Check Form

Project/Client Shaw Folder Number R12-2418

Cooler received on 4/18/12 by: Ⓢ COURIER: ALS UPS FEDEX VELOCITY CLIENT

- Were custody seals on outside of cooler? YES NO
- Were custody papers properly filled out (ink, signed, etc.)? YES NO
- Did all bottles arrive in good condition (unbroken)? YES NO
- Did VOA vials, Alkalinity, or Sulfide have significant\* air bubbles? YES NO N/A / TB vial
- Were Ice or Ice packs present? YES NO
- Where did the bottles originate? ALS/ROC CLIENT
- Temperature of cooler(s) upon receipt: 5.1°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 4/18/12 0905

Thermometer ID IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition & Client Approval to Run Samples:

All Samples held in storage location	<u>R-002</u>	by	<u>Ⓢ</u>	on	<u>4/18/12</u>	at	<u>0905</u>
5035 samples placed in storage location		by		on		at	

PC Secondary Review: MPY 4/18/12

Cooler Breakdown: Date: 4/18/12 Time: 1249 by: Shw

- Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- Did all bottle labels and tags agree with custody papers? YES NO
- Were correct containers used for the tests indicated? YES NO
- Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent			Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH	
		YES	NO							
≥12	NaOH									Yes = All samples OK  No = Samples were preserved at lab as listed  PM OK to Adjust:
≤2	HNO <sub>3</sub>	X		covered by client label,						
≤2	H <sub>2</sub> SO <sub>4</sub>									
<4	NaHSO <sub>4</sub>									
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)						*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-							
	Zn Aceta	-	-							
	HCl	*	*	<u>4111060</u>	<u>3/13</u>					

Bottle lot numbers: 1-315-002, 031212-2K,

Other Comments:

PC Secondary Review: MPY 4/30/12

### Data Usability Worksheet

<b>Project Name :</b>	Varian Medical Systems, Inc	<b>Job Number :</b>	139340
<b>Prepared By:</b>	Jennifer Gailey	<b>Date :</b>	6/7/2012
<b>Analyte Group :</b>	Volatile Organics	<b>Analytical Method :</b>	TO-15

**Completed MADEP CAM Certification Form included:** Yes                                  **Laboratory ID No. :** R1203160

**Chain of Custody included in Data Package ?** Yes                                  **Is it Complete ?** Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
5/16/2012	TO-15		30 days	5/23/2012

**Sample temperature above QC limit:** NA

**Surrogate Recovery**

Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

**MS/MSD**

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

**Laboratory Control Samples**

Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: NA

<b>Equipment Field Blank ID :</b>	NA
<b>Trip Blank ID :</b>	NA
<b>Method Blank:</b>	TO-15                                  5/23/2012

**Were any compounds identified in the method blank, field blank or trip blank above detection limits ?** No

**If so, list Sample ID/Compound/Concentration/Units:** NA

**Notes:**

All samples were analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

**Reviewed By:**                                  Pemilla Haley



May 30, 2012

Service Request No: R1203160

Mr. Ray Cadorette  
Shaw Environmental & Infrastructure, Inc.  
100 Technology Center  
Stoughton, MA 02072

**Laboratory Results for: Varian Beverly Air Samples/139340**

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on May 17, 2012. For your reference, these analyses have been assigned our service request number **R1203160**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

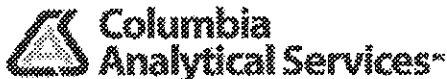
Please contact me if you have any questions. My extension is 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

**Columbia Analytical Services, Inc. dba ALS Environmental**

Michael Perry  
Laboratory Manager

Page 1 of 18



ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623

PHONE 585-288-5380 | FAX 585-288-8475

Columbia Analytical Services, Inc.

Part of the ALS Group A Campbell Brothers Limited Company

**COLUMBIA ANALYTICAL SERVICES, INC.**

**Client:** Shaw E & I, Inc.  
**Project:** Varian Beverly  
**Sample Matrix:** Air

**Service Request No.:** R1203160  
**Project No.:** 139340  
**Date Received:** 5/17/12

**CASE NARRATIVE**

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. This report contains analytical results for samples designated for Tier II, MASS. CAM deliverables. When appropriate to the method, blank and LCS results have been reported with each analytical test.

**Sample Receipt**

Shaw air samples were collected on 5/16/12 and received at CAS in good condition as noted on the receipt and preservation check form. The samples were stored in the laboratory at room temperature prior to analysis. See the CAS case narrative for a cross-reference between Client ID and CAS Job #.

**TO - 15 Air Analysis**

One air sample was analyzed for a site list of Volatile Organics by EPA method TO-15.

All samples were analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

All initial and continuing calibrations were compliant.

All surrogate standard recoveries were within QC limits.

The LCS recoveries were all within QC limits of 70 – 130 %. All RPD data were within QC limits.

No analytical or QC problems were encountered with these analyses.

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R1203160

Lab ID  
R1203160-001

Client ID  
VP-4 30 TOZER

## MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc.

Project #: 139340

Project Location: Varian Beverly

RTN:

**This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):**  
R1203160-001

Matrices:  Groundwater/Surface Water  Soil/Sediment  Drinking Water  Air  Other:

**CAM Protocol** (check all that apply below):

8260 VOC CAM II A <input type="checkbox"/>	7470/7471 Hg CAM III B <input type="checkbox"/>	MassDEP VPH CAM IV A <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input checked="" type="checkbox"/>
6010 Metals CAM III A <input type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	8082 PCB CAM V A <input type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6860 Perchlorate CAM VIII B <input type="checkbox"/>	

**Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes <input type="checkbox"/> No
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes <input type="checkbox"/> No
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes <input type="checkbox"/> No
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes <input type="checkbox"/> No
<b>E</b>	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	X Yes <input type="checkbox"/> No X Yes <input type="checkbox"/> No
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes <input type="checkbox"/> No

**Responses to Questions G, H and I below are required for "Presumptive Certainty" status**

<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes <input type="checkbox"/> No <sup>1</sup>
----------	-----------------------------------------------------------------------------------------------------------	------------------------------------------------

**Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	X Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s) <span style="font-size: small;">(site list)</span>	X Yes <input type="checkbox"/> No <sup>1</sup>

<sup>1</sup>All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Michael K. Perry

Position: Laboratory Manager

Printed Name: Michael K. Perry

Date: 5/30/12 00004

**REPORT QUALIFIERS**

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
- H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.

**CAS/Rochester Lab ID # for Massachusetts Certification**

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

*The Commonwealth of Massachusetts*



*Department of Environmental Protection*

*Division of Environmental Analysis  
Senator William X. Wall Experiment Station*

*certifies*

M-NY032

COLUMBIA ANALYTICAL SERVICES  
1565 JEFFERSON RD  
BUILDING 300, SUITE 360  
ROCHESTER, NY 14623-0000

*Laboratory Director:* Michael K. Perry

*for the analysis of* NON POTABLE WATER (CHEMISTRY)

*pursuant to 310 CMR 42.00*

*This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.*

*This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.*

*Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.*

*Oscair C. Jacobs*

*Director, Division of Environmental Analysis*

*Issued:* 01 JUL 2011

*Expires:* 30 JUN 2012



COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)	Effective Date	25 AUG 2011	Expiration Date	30 JUN 2012
<u>Analytes</u>			<u>Methods</u>	
ALUMINUM			EPA 200.7	
ANTIMONY			EPA 200.7	
ANTIMONY			EPA 200.8	
ARSENIC			EPA 200.7	
ARSENIC			EPA 200.8	
BERYLLIUM			EPA 200.7	
BERYLLIUM			EPA 200.8	
CADMIUM			EPA 200.7	
CADMIUM			EPA 200.8	
CHROMIUM			EPA 200.7	
CHROMIUM			EPA 200.8	
COBALT			EPA 200.7	
COBALT			EPA 200.8	
COPPER			EPA 200.7	
COPPER			EPA 200.8	
IRON			EPA 200.7	
LEAD			EPA 200.7	
LEAD			EPA 200.8	
MANGANESE			EPA 200.7	
MANGANESE			EPA 200.8	
MERCURY			EPA 245.1	
MOLYBDENUM			EPA 200.7	
MOLYBDENUM			EPA 200.8	
NICKEL			EPA 200.7	
NICKEL			EPA 200.8	
SELENIUM			EPA 200.7	
SELENIUM			EPA 200.8	
SILVER			EPA 200.7	
SILVER			EPA 200.8	
THALLIUM			EPA 200.7	
THALLIUM			EPA 200.8	
VANADIUM			EPA 200.7	
VANADIUM			EPA 200.8	
ZINC			EPA 200.7	
ZINC			EPA 200.8	
PH			SM 4500-H-B	
SPECIFIC CONDUCTIVITY			EPA 120.1	
TOTAL DISSOLVED SOLIDS			SM 2540C	
HARDNESS (CaCO3), TOTAL			SM 2340C	
CALCIUM			EPA 200.7	
MAGNESIUM			EPA 200.7	
SODIUM			EPA 200.7	
POTASSIUM			EPA 200.7	

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 25 AUG 2011

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)      Effective Date      25 AUG 2011      Expiration Date      30 JUN 2012

<u>Analytes</u>	<u>Methods</u>
ALKALINITY, TOTAL	SM 2320B
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340  
**Sample Matrix:** Air  
**Sample Name:** VP-4 30 TOZER  
**Lab Code:** R1203160-001

**Service Request:** R1203160  
**Date Collected:** 5/16/12 1016  
**Date Received:** 5/17/12

**Analytical Method:** TO-15

**Date Analyzed:** 5/23/12 1014  
**Canister Dilution Factor:** 1.40

Initial Pressure (psig): -1.72                      Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	10	63	63	31	31	U
75-01-4	Vinyl Chloride	10	8.4	8.4	3.3	3.3	U
74-83-9	Bromomethane	10	60	60	16	16	U
75-00-3	Chloroethane	10	81	81	31	31	U
67-64-1	Acetone	10	1700	700	700	290	
75-69-4	Trichlorofluoromethane (CFC 11)	10	87	87	15	15	U
75-35-4	1,1-Dichloroethene	10	62	62	16	16	U
75-09-2	Methylene Chloride	10	53	53	15	15	U
156-60-5	trans-1,2-Dichloroethene	10	62	62	16	16	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	63	63	16	16	U
156-59-2	cis-1,2-Dichloroethene	10	62	62	16	16	U
67-66-3	Chloroform	10	76	76	15	15	U
107-06-2	1,2-Dichloroethane	10	63	63	16	16	U
71-55-6	1,1,1-Trichloroethane (TCA)	10	84	84	15	15	U
56-23-5	Carbon Tetrachloride	10	9.8	9.8	1.6	1.6	U
78-87-5	1,2-Dichloropropane	10	71	71	15	15	U
75-27-4	Bromodichloromethane	10	21	21	3.1	3.1	U
79-01-6	Trichloroethene (TCE)	10	3300	8.4	620	1.6	
10061-01-5	cis-1,3-Dichloropropene	10	140	140	31	31	U
10061-02-6	trans-1,3-Dichloropropene	10	70	70	15	15	U
79-00-5	1,1,2-Trichloroethane	10	84	84	15	15	U
124-48-1	Dibromochloromethane	10	27	27	3.1	3.1	U
127-18-4	Tetrachloroethene (PCE)	10	1100	11	170	1.7	
108-90-7	Chlorobenzene	10	71	71	16	16	U
100-41-4	Ethylbenzene	10	130	130	31	31	U
179601-23-1	m,p-Xylenes	10	270	270	62	62	U
75-25-2	Bromoform	10	160	160	15	15	U
95-47-6	o-Xylene	10	130	130	31	31	U
79-34-5	1,1,2,2-Tetrachloroethane	10	21	21	3.1	3.1	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	107	70-130	5/23/12 1014	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340  
**Sample Matrix:** Air  
**Sample Name:** Method Blank  
**Lab Code:** RQ1205721-01

**Service Request:** R1203160  
**Date Collected:** NA  
**Date Received:** NA

**Analytical Method:** TO-15

**Date Analyzed:** 5/23/12 0928

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
74-87-3	Chloromethane	1000	0.45	0.45	0.22	0.22	U
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
75-00-3	Chloroethane	1000	0.58	0.58	0.22	0.22	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-69-4	Trichlorofluoromethane (CFC 11)	1000	0.62	0.62	0.11	0.11	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.45	0.45	0.11	0.11	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	106	70-130	5/23/12 0928	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly Air Samples/139340  
**Sample Matrix:** Air

**Service Request:** R1203160  
**Date Analyzed:** 5/23/12

**Lab Control Sample Summary**  
**Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS**

**Analytical Method:** TO-15

**Units:** µg/m<sup>3</sup>

**Basis:** NA

**Analysis Lot:** 293129

**Lab Control Sample**

RQ1205721-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Chloromethane	5.26	5.11	103	70 - 130
Vinyl Chloride	6.04	6.33	95	70 - 130
Bromomethane	8.45	9.60	88	70 - 130
Chloroethane	5.76	6.46	89	70 - 130
Acetone	5.68	6.29	90	50 - 150
Trichlorofluoromethane (CFC 11)	13.6	15.0	91	70 - 130
1,1-Dichloroethene	9.63	10.0	96	70 - 130
Methylene Chloride	8.57	8.86	97	70 - 130
trans-1,2-Dichloroethene	9.50	10.2	93	70 - 130
1,1-Dichloroethane (1,1-DCA)	9.67	10.2	95	70 - 130
cis-1,2-Dichloroethene	9.57	10.2	94	70 - 130
Chloroform	12.1	12.8	94	70 - 130
1,2-Dichloroethane	10.5	10.4	100	70 - 130
1,1,1-Trichloroethane (TCA)	14.1	13.8	102	70 - 130
Carbon Tetrachloride	16.5	16.2	102	70 - 130
1,2-Dichloropropane	11.9	11.9	100	70 - 130
Bromodichloromethane	18.1	17.2	105	70 - 130
Trichloroethene (TCE)	14.3	13.8	104	70 - 130
cis-1,3-Dichloropropene	12.1	11.9	102	70 - 130
trans-1,3-Dichloropropene	11.1	11.0	101	70 - 130
1,1,2-Trichloroethane	14.4	14.2	101	70 - 130
Dibromochloromethane	23.6	23.6	100	70 - 130
Tetrachloroethene (PCE)	20.0	17.5	114	70 - 130
Chlorobenzene	11.9	12.1	99	70 - 130
Ethylbenzene	10.9	11.3	97	70 - 130
m,p-Xylenes	21.0	22.1	95	70 - 130
Bromoform	29.3	26.3	111	70 - 130
o-Xylene	11.0	12.3	89	70 - 130
1,1,2,2-Tetrachloroethane	17.0	19.4	88	70 - 130

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly Air Samples 139340

Detailed Sample Information

<u>CAS Sample ID</u>	<u>Client Sample ID</u>	<u>Container Type</u>	<u>Pi1 (Hg)</u>	<u>Pi1 (psig)</u>	<u>Pf1</u>	<u>Pi2 (Hg)</u>	<u>Pi2 (psig)</u>	<u>Pf2</u>	<u>Cont ID</u>	<u>Order #</u>	<u>FC ID</u>
R1203160-001.01	VP-4.30 TOZER	6.0 L-Non-Specified SC	-3.50	-1.72	3.50				SLC00119	31579	FC00753

Miscellaneous Items - received

CAS Flow Controller Calibration  
Flows in mL/min.  
Values retrievd from LIMS

Folder # R1203160

Order #	ID #	Pre Cal	Post Cal	RPD	Comment
R1203160-001	FC00753	41.9	42.9	2.4	

# Sample Collection Supplies



T019262

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly  
SDG Name: Varian Beverly Air Samples  
P.O. Number: 727459  
Shipped To: Ben Short  
121 Brady Ave.  
Salem, NH 03079  
E-mail: wayne.holt@shawgrp.com  
Phone: 617-212-8278

Order #: 31579  
Date Required: 5/14/12  
Project Chemist: Michael Perry  
Phone Number: 585-288-5380 x7469

Shipped Date: 05/09/2012  
Shipping Cost: \$ 0.00

Comments: Bag containers by sample template.

## Grouped by Container Type

ID	Container	Shipped Pressure
1	6.0L-Non-Specified	
SLC00119	6.0 L-Non-Specified SC	-29.00
FC00753	1 each-Flow Controller Stainless Steel	

## Grouped by Sample Template

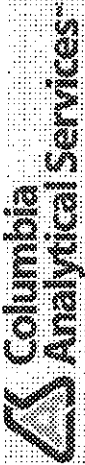
Sample Template Number / Name	Expected Number of Samples	Containers	Number of Containers per Sample	Comments
001 / TO-15	1			
		6.0L-Non-Specified SC - TO-15	1	

Quantity	Miscellaneous Supply
1	Flow Controller, 6L, 2hr

**Precautions:** Preserved sample containers should not be overflowed while filling. Under no circumstances should the inside of the containers or lids be handled.

**Please return this form with your coolers when delivering your samples to Columbia Analytical Services.**





# QC Certification

Columbia Analytical Services, Inc.  
 1565 Jefferson Rd, Building 300  
 Suite 360  
 Rochester, NY 14623  
 Ph. 585-288-5380  
 Fax 585-288-8475

<u>Container IDs</u>	<u>Cleaned Date</u>	<u>Date Analyzed</u>	<u>QC Results</u>	<u>Comments</u>
FC00753	4/16/12	4/16/12	Pass w/ Conditions	EPA TO-15 (43 Cmpds. + TICs)
SLC00119	4/17/12	4/19/12		

00015

\* QC Canister

MS#13 (AIR2)

D-662 -166  
BOOK PAGE

5/23/12  
PROJECT

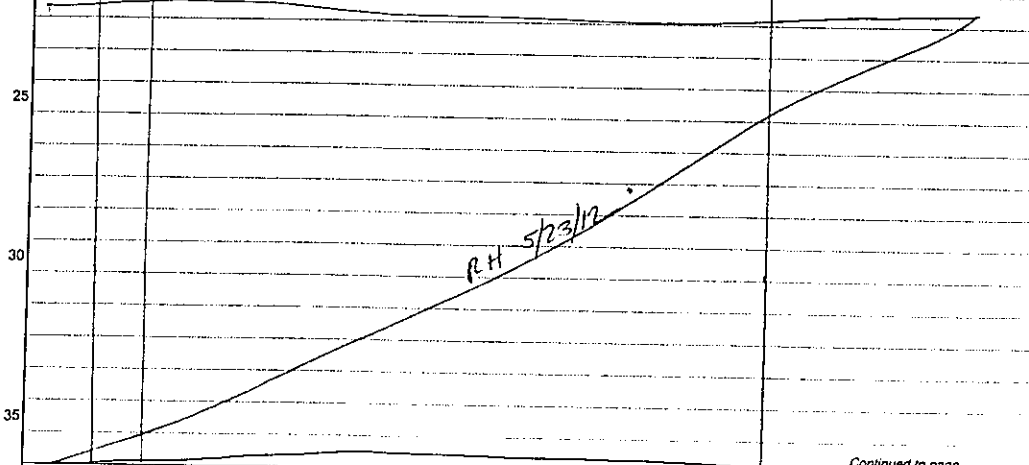
R. Herrwig

TITLE TD-15

Continued from page

LEAK Check: 0.8 psia → 1.5 psia in 6.75 min  
Pressures: He = 21.2 psia, IS = 20.7 psia, ATM = 14.2 psia  
Volumes: IS = 250 ml # 44857, Nominal Sample Vol. = 1000 ml  
Methods: TUNE = BFB.U, GCMS = 112111.M, Entech = CAS, MPT

AS. VOL. (ml)	SAMPLE	client	file#	OK?/comment
14 500	ROOM AIR		B2724	-
14 500	ROOM AIR		B2725	-
14 0	TUNE CHECK		B2726	Y (06:24)
15 500	CCV # 44270		B2727	Y
14 250	LCS # 44271		B2728	Y
1 1000	MET BLK		B2729	Y
SYR 10.0	R1203160-001	[SHAW 8456 T2]	B2730	Y
SYR 6.9	R1203262-001	[TRC 4456 T2]	B2731	Y
SYR 24	-002		B2732	Y
SYR 26	-003		B2733	Y
SYR 14.8	-005		B2734	Y
SYR 4.6	-006		B2735	Y
2 162	-004		B2736	Y
2 162	-004 DUP		B2737	Y



SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

DISCLOSED TO AND UNDERSTOOD BY \_\_\_\_\_ DATE \_\_\_\_\_

Continued to page

PROPRIETARY INFORMATION

TITLE

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SIGNATURE

DISCLOSED TO AND UNDERSTOOD BY

00016

Requested Turnaround Time in Business Days from Receipt, please circle:

1 Day 2 Day 3 Day 4 Day 5 Day 16 Day-Standard

CAS Project #:

Company Name: <u>SHAW</u>		Project Name: <u>VARIAN Beverly MA</u>		CAS Contact:	
Address: <u>100 TECHNOLOGY CTR DRIVE</u>		Project Number: <u>139340</u>		Analysis Method and/or Analytes	
City, State, Zip: <u>STOUGHTON MA</u>		P.O. #/Billing Information: <u>781689</u>		Comments Specific Instructions	
Project Manager: <u>RAY CADORETTE</u>		Sampler (Print & Sign): <u>BEN SHORI / BSH</u>		VOC TO-site (FIVE LIST) X	
Phone: _____ Fax: _____		Canister ID: <u>753</u>			
E-mail (for result reporting): <u>Raymond.Cadorette@shaw-sto.com</u>		Flow Controller ID: _____			
Laboratory ID Number: _____		Time Collected: _____			
Client Sample ID: <u>VP-4 30 TOZER</u>		Date Collected: <u>5-16-12</u>			
Date Collected: _____		Time Collected: _____			
Date Collected: _____		Time Collected: _____			
Date Collected: _____		Time Collected: _____			
Date Collected: _____		Time Collected: _____			
Date Collected: _____		Time Collected: _____			
What State were samples collected in: <u>MA</u>					
Report Tier Levels - please select: Tier I (Results/Default, if not specified) _____ Tier II (Results + QC) _____ Tier III (CLP Forms Only) _____ Tier IV (Data Validation) _____ EDD required: YES / NO _____ Type: _____ EDD Units: _____ Relinquished by: (Signature) <u>[Signature]</u> Date: <u>5-16-12</u> Time: <u>1:15</u> Relinquished by: (Signature) <u>[Signature]</u> Date: <u>5-16-12</u> Time: <u>1:15</u> Relinquished by: (Signature) _____ Date: _____ Time: _____ Relinquished by: (Signature) _____ Date: _____ Time: _____					
Project Requirements (MRLs, QAPP, etc.)					

**R1203160**  
 Shaw Environmental & Infrastructure, Inc.  
 Varian Beverly Air Samples





# Cooler Receipt and Preservation Check Form

Project/Client Shaw Folder Number R12-3077

Cooler received on 5/17/12 by: AD COURIER: ALS UPS FEDEX VELOCITY CLIENT

- Were custody seals on outside of cooler? YES NO
  - Were custody papers properly filled out (ink, signed, etc.)? YES NO
  - Did all bottles arrive in good condition (unbroken)? YES NO
  - Did VOA vials, Alkalinity, or Sulfide have significant\* air bubbles? YES NO N/A
  - Were Ice or Ice packs present? YES NO
  - Where did the bottles originate? ALS/ROC, CLIENT
  - Temperature of cooler(s) upon receipt: AR
- Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes  
 If No, Explain Below No No No No No

Date/Time Temperatures Taken: AR

Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

### If out of Temperature, note packing/ice condition & Client Approval to Run Samples:

All Samples held in storage location SMO by AD on 5/17/12 at 1015  
 5035 samples placed in storage location \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_

PC Secondary Review AD 5/17/12

Cooler Breakdown: Date: 5/17/12 Time: 1350 1900 by: AD

- Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- Did all bottle labels and tags agree with custody papers? YES NO
- Were correct containers used for the tests indicated? YES NO
- Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A AD 5/17/12 1845

Explain any discrepancies: \_\_\_\_\_

pH	Reagent	YES NO		Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
		YES	NO						
≥12	NaOH								
≤2	HNO <sub>3</sub>								
≤2	H <sub>2</sub> SO <sub>4</sub>								
<4	NaHSO <sub>4</sub>								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*	<u>Client covered</u>					

Yes = All samples OK  
 No = Samples were preserved at lab as listed  
 PM OK to Adjust: \_\_\_\_\_

Bottle lot numbers: Client covered AD 5/17/12  
 Other Comments: \_\_\_\_\_

PC Secondary Review: AD 5/30/12  
 H:\SMODOCS\Cooler Receipt 5.doc

\*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

## Data Usability Worksheet

<b>Project Name :</b>	Varian Medical Systems, Inc	<b>Job Number :</b>	146898
<b>Prepared By:</b>	Jennifer Gailey	<b>Date :</b>	9/6/2012
<b>Analyte Group :</b>	Volatile Organics SVOCs PCBs EPH Total Metals (Fe & Mn)	<b>Analytical Method :</b>	EPA Method 8260C EPA method 8270 8082 MADEP EPH EPA Method 6010B

**Completed MADEP CAM Certification Form included:** Yes

**Laboratory ID No. :** R1205125

**Chain of Custody included in Data Package ?** Yes

**Is it Complete ?** No

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
8/2, 8/3/2012	VOC 8260C		14 days	8/13, 8/16/2012
8/3/2012	SVOCs 8270		14 days	8/10/2012
8/3/2012	PCBs 8082		6 months	8/14/2012
8/3/2012	EPH		28 days	8/14/2012
8/3/2012	Metals total 6010		6 months	8/22/2012

**Sample temperature within QC limits:** Yes, temperature 2.6 degrees

**Surrogate Recovery**

Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

**MS/MSD**

Are all MS/MSD sample recoveries within the QC limits ? Yes

If No, list sample ID, date and compound where limit was exceeded: NA

**Laboratory Control Samples**

Are all laboratory control sample recoveries within the QC limits ? No

If no, list sample ID where range was exceeded:

LCSD recoveries for Diethyl Ether and 1-1,-Dichloroethene were outside limits and are flagged with an \*

**Equipment Field Blank ID :** N/A  
**Trip Blank ID :** N/A

<b>Method Blank:</b>	VOC 8260C	8/13, 8/16/2012
	SVOCs	8/10/2012
	8082	8/14/2012
	EPH	8/14/2012
	6010B	8/22/2012

**Were any compounds identified in the method blank, field blank or trip blank above detection limits ?** No

**If so, list Sample ID/Compound/Concentration/Units:** NA

**Notes:**

**Reviewed By:** Pernilla Haley



August 27, 2012

Service Request No: R1205125

Mr. Ray Cadorette  
Shaw Environmental & Infrastructure, Inc.  
100 Technology Center  
Stoughton, MA 02072

**Laboratory Results for: Varian Beverly - Soil/146898**

Dear Mr. Cadorette:

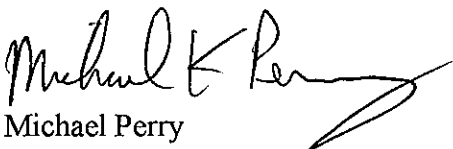
Enclosed are the results of the sample(s) submitted to our laboratory on August 8, 2012. For your reference, these analyses have been assigned our service request number **R1205125**.

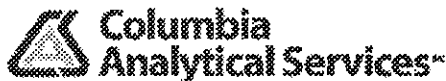
All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7469. You may also contact me via email at [Mike.Perry@alsglobal.com](mailto:Mike.Perry@alsglobal.com).

Respectfully submitted,

**Columbia Analytical Services, Inc. dba ALS Environmental**

  
Michael Perry  
Laboratory Manager



ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623

PHONE 585-288-5380 | FAX 585-288-8475

Columbia Analytical Services, Inc.

Part of the ALS Group A Campbell Brothers Limited Company



PROFESSOR SOLUTIONS GROUP CORPORATION

Report Date:  
21-Aug-12 11:32



- Final Report
- Re-Issued Report
- Revised Report

SPECTRUM ANALYTICAL, INC.  
Featuring  
HANIBAL TECHNOLOGY  
**Laboratory Report**

ALS Environmental  
1565 Jefferson Road, Building 300 Suite 360  
Rochester York, NY 14623  
Attn: Michael Perry

Project: See Chain of Custody  
Project #: R1205125

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SB54305-01	Roll Off	Soil	03-Aug-12 13:20	09-Aug-12 10:00

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.  
All applicable NELAC requirements have been met.

- Massachusetts # M-MA138/MA1110
- Connecticut # PH-0777
- Florida # E87600/E87936
- Maine # MA138
- New Hampshire # 2538
- New Jersey # MA011/MA012
- New York # 11393/11840
- Pennsylvania # 68-04426/68-02924
- Rhode Island # 98
- USDA # S-51435



Authorized by:

Nicole Leja  
Laboratory Director

Spectrum Analytical holds certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 10 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Spectrum Analytical, Inc.

*Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Spectrum is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at [www.spectrum-analytical.com](http://www.spectrum-analytical.com) for a full listing of our current certifications and fields of accreditation. States in which Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (NY-11840, FL-E87936 and NJ-MA012).*

*Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.*

The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

<b>Matrices</b>	Soil
<b>Containers</b>	✓ Satisfactory
<b>Aqueous Preservative</b>	✓ N/A                      pH≤2                      pH>2                      pH adjusted to <2 in lab
<b>Temperature</b>	✓ Received on ice                      Received at 4 ± 2 °C                      ✓ Other: 0.8°C

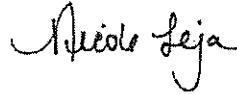
Were all QA/QC procedures followed as required by the EPH method? *Yes*

Were any significant modifications made to the EPH method as specified in Section 11.3? *No*

Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

I attest that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Authorized by:



Nicole Leja  
Laboratory Director



**CASE NARRATIVE:**

The samples were received 0.8 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

**There is no relevant protocol-specific QC and/or performance standards non-conformances to report.**

Sample Identification

**Roll Off** SB54305-01      **Client Project #** R1205125      **Matrix** Soil      **Collection Date/Time** 03-Aug-12 13:20      **Received** 09-Aug-12

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
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**Extractable Petroleum Hydrocarbons**

EPH Aliphatic/Aromatic Ranges

Prepared by method SW846 3545A

	C9-C18 Aliphatic Hydrocarbons	192		mg/kg dry	11.2	1.64	1	MADEP EPH 5/2004 R	13-Aug-12	15-Aug-12	MP	1219314	
	C19-C36 Aliphatic Hydrocarbons	139		mg/kg dry	11.2	5.46	1	"	"	"	"	"	
	C11-C22 Aromatic Hydrocarbons	140		mg/kg dry	11.2	4.04	1	"	"	"	"	"	
	Unadjusted C11-C22 Aromatic Hydrocarbons	144		mg/kg dry	11.2	4.04	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	471		mg/kg dry	33.5	11.1	1	"	"	"	"	"	
	Unadjusted Total Petroleum Hydrocarbons	475		mg/kg dry	33.5	11.1	1	"	"	"	"	"	

EPH Target PAH Analytes

Prepared by method SW846 3545A

91-20-3	Naphthalene	< 0.372		mg/kg dry	0.372	0.194	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	1.33		mg/kg dry	0.372	0.194	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 0.372		mg/kg dry	0.372	0.218	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 0.372		mg/kg dry	0.372	0.217	1	"	"	"	"	"	
86-73-7	Fluorene	0.490		mg/kg dry	0.372	0.220	1	"	"	"	"	"	
85-01-8	Phenanthrene	1.76		mg/kg dry	0.372	0.253	1	"	"	"	"	"	
120-12-7	Anthracene	< 0.372		mg/kg dry	0.372	0.275	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 0.372		mg/kg dry	0.372	0.249	1	"	"	"	"	"	
129-00-0	Pyrene	< 0.372		mg/kg dry	0.372	0.268	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	< 0.372		mg/kg dry	0.372	0.269	1	"	"	"	"	"	
218-01-9	Chrysene	< 0.372		mg/kg dry	0.372	0.289	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	< 0.372		mg/kg dry	0.372	0.331	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 0.372		mg/kg dry	0.372	0.310	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 0.372		mg/kg dry	0.372	0.250	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	< 0.372		mg/kg dry	0.372	0.330	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 0.372		mg/kg dry	0.372	0.269	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 0.372		mg/kg dry	0.372	0.276	1	"	"	"	"	"	

Surrogate recoveries:

3386-33-2	1-Chlorooctadecane	78			40-140 %			"	"	"	"	"	
84-15-1	Ortho-Terphenyl	87			40-140 %			"	"	"	"	"	
321-60-8	2-Fluorobiphenyl	76			40-140 %			"	"	"	"	"	

**General Chemistry Parameters**

	% Solids	85.0		%			1	SM2540 G Mod.	15-Aug-12	16-Aug-12	DT	1219574	
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*This laboratory report is not valid without an authorized signature on the cover page.*

**Extractable Petroleum Hydrocarbons - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch 1219314 - SW846 3545A</b>										
<u>Blank (1219314-BLK1)</u>					<u>Prepared: 13-Aug-12 Analyzed: 14-Aug-12</u>					
C9-C18 Aliphatic Hydrocarbons	< 10.0		mg/kg wet	10.0						
C19-C36 Aliphatic Hydrocarbons	< 10.0		mg/kg wet	10.0						
C11-C22 Aromatic Hydrocarbons	< 10.0		mg/kg wet	10.0						
Unadjusted C11-C22 Aromatic Hydrocarbons	< 10.0		mg/kg wet	10.0						
Total Petroleum Hydrocarbons	< 30.0		mg/kg wet	30.0						
Unadjusted Total Petroleum Hydrocarbons	< 30.0		mg/kg wet	30.0						
Naphthalene	< 0.333		mg/kg wet	0.333						
2-Methylnaphthalene	< 0.333		mg/kg wet	0.333						
Acenaphthylene	< 0.333		mg/kg wet	0.333						
Acenaphthene	< 0.333		mg/kg wet	0.333						
Fluorene	< 0.333		mg/kg wet	0.333						
Phenanthrene	< 0.333		mg/kg wet	0.333						
Anthracene	< 0.333		mg/kg wet	0.333						
Fluoranthene	< 0.333		mg/kg wet	0.333						
Pyrene	< 0.333		mg/kg wet	0.333						
Benzo (a) anthracene	< 0.333		mg/kg wet	0.333						
Chrysene	< 0.333		mg/kg wet	0.333						
Benzo (b) fluoranthene	< 0.333		mg/kg wet	0.333						
Benzo (k) fluoranthene	< 0.333		mg/kg wet	0.333						
Benzo (a) pyrene	< 0.333		mg/kg wet	0.333						
Indeno (1,2,3-cd) pyrene	< 0.333		mg/kg wet	0.333						
Dibenzo (a,h) anthracene	< 0.333		mg/kg wet	0.333						
Benzo (g,h,i) perylene	< 0.333		mg/kg wet	0.333						
n-Nonane (C9)	< 0.333		mg/kg wet	0.333						
n-Decane	< 0.333		mg/kg wet	0.333						
n-Dodecane	< 0.333		mg/kg wet	0.333						
n-Tetradecane	< 0.333		mg/kg wet	0.333						
n-Hexadecane	< 0.333		mg/kg wet	0.333						
n-Octadecane	< 0.333		mg/kg wet	0.333						
n-Nonadecane	< 0.333		mg/kg wet	0.333						
n-Eicosane	< 0.333		mg/kg wet	0.333						
n-Docosane	< 0.333		mg/kg wet	0.333						
n-Tetracosane	< 0.333		mg/kg wet	0.333						
n-Hexacosane	< 0.333		mg/kg wet	0.333						
n-Octacosane	< 0.333		mg/kg wet	0.333						
n-Triacontane	< 0.333		mg/kg wet	0.333						
n-Hexatriacontane	< 0.333		mg/kg wet	0.333						
Naphthalene (aliphatic fraction)	0.00		mg/kg wet							
2-Methylnaphthalene (aliphatic fraction)	0.00		mg/kg wet							
<i>Surrogate: 1-Chlorooctadecane</i>	2.29		mg/kg wet		3.33		69	40-140		
<i>Surrogate: Ortho-Terphenyl</i>	2.39		mg/kg wet		3.33		72	40-140		
<i>Surrogate: 2-Fluorobiphenyl</i>	1.73		mg/kg wet		2.67		65	40-140		
<u>LCS (1219314-BS1)</u>					<u>Prepared: 13-Aug-12 Analyzed: 14-Aug-12</u>					
C9-C18 Aliphatic Hydrocarbons	29.1		mg/kg wet	10.0	40.0		73	40-140		
C19-C36 Aliphatic Hydrocarbons	36.5		mg/kg wet	10.0	53.3		68	40-140		
C11-C22 Aromatic Hydrocarbons	69.3		mg/kg wet	10.0	113		61	40-140		
Naphthalene	3.04		mg/kg wet	0.333	6.67		46	40-140		
2-Methylnaphthalene	3.17		mg/kg wet	0.333	6.67		48	40-140		
Acenaphthylene	3.66		mg/kg wet	0.333	6.67		55	40-140		
Acenaphthene	3.84		mg/kg wet	0.333	6.67		58	40-140		
Fluorene	4.11		mg/kg wet	0.333	6.67		62	40-140		

*This laboratory report is not valid without an authorized signature on the cover page.*

**Extractable Petroleum Hydrocarbons - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch 1219314 - SW846 3545A</b>										
<u>LCS (1219314-BS1)</u>					Prepared: 13-Aug-12 Analyzed: 14-Aug-12					
Phenanthrene	4.43		mg/kg wet	0.333	6.67		66	40-140		
Anthracene	4.30		mg/kg wet	0.333	6.67		64	40-140		
Fluoranthene	4.40		mg/kg wet	0.333	6.67		66	40-140		
Pyrene	4.33		mg/kg wet	0.333	6.67		65	40-140		
Benzo (a) anthracene	4.91		mg/kg wet	0.333	6.67		74	40-140		
Chrysene	4.49		mg/kg wet	0.333	6.67		67	40-140		
Benzo (b) fluoranthene	4.95		mg/kg wet	0.333	6.67		74	40-140		
Benzo (k) fluoranthene	4.39		mg/kg wet	0.333	6.67		66	40-140		
Benzo (a) pyrene	4.57		mg/kg wet	0.333	6.67		69	40-140		
Indeno (1,2,3-cd) pyrene	5.30		mg/kg wet	0.333	6.67		79	40-140		
Dibenzo (a,h) anthracene	5.57		mg/kg wet	0.333	6.67		84	40-140		
Benzo (g,h,i) perylene	5.17		mg/kg wet	0.333	6.67		78	40-140		
n-Nonane (C9)	2.10		mg/kg wet	0.333	6.67		31	30-140		
n-Decane	2.99		mg/kg wet	0.333	6.67		45	40-140		
n-Dodecane	3.07		mg/kg wet	0.333	6.67		46	40-140		
n-Tetradecane	3.52		mg/kg wet	0.333	6.67		53	40-140		
n-Hexadecane	3.98		mg/kg wet	0.333	6.67		60	40-140		
n-Octadecane	4.24		mg/kg wet	0.333	6.67		64	40-140		
n-Nonadecane	4.27		mg/kg wet	0.333	6.67		64	40-140		
n-Eicosane	4.36		mg/kg wet	0.333	6.67		65	40-140		
n-Docosane	4.22		mg/kg wet	0.333	6.67		63	40-140		
n-Tetracosane	4.19		mg/kg wet	0.333	6.67		63	40-140		
n-Hexacosane	4.31		mg/kg wet	0.333	6.67		65	40-140		
n-Octacosane	4.39		mg/kg wet	0.333	6.67		66	40-140		
n-Triacontane	4.30		mg/kg wet	0.333	6.67		65	40-140		
n-Hexatriacontane	4.38		mg/kg wet	0.333	6.67		66	40-140		
Naphthalene (aliphatic fraction)	0.00		mg/kg wet					0-200		
2-Methylnaphthalene (aliphatic fraction)	0.00		mg/kg wet					0-200		
Surrogate: 1-Chlorooctadecane	2.16		mg/kg wet		3.33		65	40-140		
Surrogate: Ortho-Terphenyl	2.25		mg/kg wet		3.33		67	40-140		
Surrogate: 2-Fluorobiphenyl	1.89		mg/kg wet		2.67		71	40-140		
Naphthalene Breakthrough	0.00		%					0-5		
2-Methylnaphthalene Breakthrough	0.00		%					0-5		
<u>LCS (1219314-BS2)</u>					Prepared: 13-Aug-12 Analyzed: 14-Aug-12					
C9-C18 Aliphatic Hydrocarbons	36.7		mg/kg wet	10.0	40.0		92	40-140		
C19-C36 Aliphatic Hydrocarbons	33.1		mg/kg wet	10.0	53.3		62	40-140		
C11-C22 Aromatic Hydrocarbons	97.3		mg/kg wet	10.0	113		86	40-140		
Naphthalene	4.60		mg/kg wet	0.333	6.67		69	40-140		
2-Methylnaphthalene	4.67		mg/kg wet	0.333	6.67		70	40-140		
Acenaphthylene	5.11		mg/kg wet	0.333	6.67		77	40-140		
Acenaphthene	5.27		mg/kg wet	0.333	6.67		79	40-140		
Fluorene	5.41		mg/kg wet	0.333	6.67		81	40-140		
Phenanthrene	5.34		mg/kg wet	0.333	6.67		80	40-140		
Anthracene	5.04		mg/kg wet	0.333	6.67		76	40-140		
Fluoranthene	5.21		mg/kg wet	0.333	6.67		78	40-140		
Pyrene	5.15		mg/kg wet	0.333	6.67		77	40-140		
Benzo (a) anthracene	5.68		mg/kg wet	0.333	6.67		85	40-140		
Chrysene	5.30		mg/kg wet	0.333	6.67		79	40-140		
Benzo (b) fluoranthene	5.78		mg/kg wet	0.333	6.67		87	40-140		
Benzo (k) fluoranthene	5.09		mg/kg wet	0.333	6.67		76	40-140		
Benzo (a) pyrene	5.30		mg/kg wet	0.333	6.67		79	40-140		

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**Extractable Petroleum Hydrocarbons - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch 1219314 - SW846 3545A</b>										
<u>LCS (1219314-BS2)</u>					Prepared: 13-Aug-12 Analyzed: 14-Aug-12					
Indeno (1,2,3-cd) pyrene	6.13		mg/kg wet	0.333	6.67		92	40-140		
Dibenzo (a,h) anthracene	6.50		mg/kg wet	0.333	6.67		97	40-140		
Benzo (g,h,i) perylene	5.93		mg/kg wet	0.333	6.67		89	40-140		
n-Nonane (C9)	2.45		mg/kg wet	0.333	6.67		37	30-140		
n-Decane	2.91		mg/kg wet	0.333	6.67		44	40-140		
n-Dodecane	3.27		mg/kg wet	0.333	6.67		49	40-140		
n-Tetradecane	3.51		mg/kg wet	0.333	6.67		53	40-140		
n-Hexadecane	3.75		mg/kg wet	0.333	6.67		56	40-140		
n-Octadecane	3.88		mg/kg wet	0.333	6.67		58	40-140		
n-Nonadecane	3.86		mg/kg wet	0.333	6.67		58	40-140		
n-Eicosane	3.94		mg/kg wet	0.333	6.67		59	40-140		
n-Docosane	3.85		mg/kg wet	0.333	6.67		58	40-140		
n-Tetracosane	3.83		mg/kg wet	0.333	6.67		58	40-140		
n-Hexacosane	4.00		mg/kg wet	0.333	6.67		60	40-140		
n-Octacosane	4.02		mg/kg wet	0.333	6.67		60	40-140		
n-Triacontane	3.94		mg/kg wet	0.333	6.67		59	40-140		
n-Hexatriacontane	4.04		mg/kg wet	0.333	6.67		61	40-140		
Naphthalene (aliphatic fraction)	0.00		mg/kg wet					0-200		
2-Methylnaphthalene (aliphatic fraction)	0.00		mg/kg wet					0-200		
<hr/>										
Surrogate: 1-Chlorooctadecane	1.88		mg/kg wet		3.33		56	40-140		
Surrogate: Ortho-Terphenyl	2.64		mg/kg wet		3.33		79	40-140		
Surrogate: 2-Fluorobiphenyl	2.24		mg/kg wet		2.67		84	40-140		
<hr/>										
Naphthalene Breakthrough	0.00		%					0-5		
2-Methylnaphthalene Breakthrough	0.00		%					0-5		
<u>LCS Dup (1219314-BSD1)</u>					Prepared: 13-Aug-12 Analyzed: 14-Aug-12					
C9-C18 Aliphatic Hydrocarbons	30.0		mg/kg wet	10.0	40.0		75	40-140	3	25
C19-C36 Aliphatic Hydrocarbons	40.0		mg/kg wet	10.0	53.3		75	40-140	9	25
C11-C22 Aromatic Hydrocarbons	76.0		mg/kg wet	10.0	113		67	40-140	9	25
Naphthalene	3.45		mg/kg wet	0.333	6.67		52	40-140	12	25
2-Methylnaphthalene	3.53		mg/kg wet	0.333	6.67		53	40-140	11	25
Acenaphthylene	3.90		mg/kg wet	0.333	6.67		58	40-140	6	25
Acenaphthene	4.05		mg/kg wet	0.333	6.67		61	40-140	5	25
Fluorene	4.19		mg/kg wet	0.333	6.67		63	40-140	2	25
Phenanthrene	4.33		mg/kg wet	0.333	6.67		65	40-140	2	25
Anthracene	4.16		mg/kg wet	0.333	6.67		62	40-140	3	25
Fluoranthene	4.16		mg/kg wet	0.333	6.67		62	40-140	6	25
Pyrene	4.08		mg/kg wet	0.333	6.67		61	40-140	6	25
Benzo (a) anthracene	4.47		mg/kg wet	0.333	6.67		67	40-140	9	25
Chrysene	4.20		mg/kg wet	0.333	6.67		63	40-140	7	25
Benzo (b) fluoranthene	4.99		mg/kg wet	0.333	6.67		75	40-140	0.9	25
Benzo (k) fluoranthene	3.97		mg/kg wet	0.333	6.67		60	40-140	10	25
Benzo (a) pyrene	4.25		mg/kg wet	0.333	6.67		64	40-140	7	25
Indeno (1,2,3-cd) pyrene	4.87		mg/kg wet	0.333	6.67		73	40-140	8	25
Dibenzo (a,h) anthracene	5.16		mg/kg wet	0.333	6.67		77	40-140	8	25
Benzo (g,h,i) perylene	4.76		mg/kg wet	0.333	6.67		71	40-140	8	25
n-Nonane (C9)	2.05		mg/kg wet	0.333	6.67		31	30-140	2	25
n-Decane	2.77		mg/kg wet	0.333	6.67		41	40-140	8	25
n-Dodecane	3.32		mg/kg wet	0.333	6.67		50	40-140	8	25
n-Tetradecane	3.77		mg/kg wet	0.333	6.67		57	40-140	7	25
n-Hexadecane	4.19		mg/kg wet	0.333	6.67		63	40-140	5	25
n-Octadecane	4.38		mg/kg wet	0.333	6.67		66	40-140	3	25

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**Extractable Petroleum Hydrocarbons - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch 1219314 - SW846 3545A</b>										
<u>LCS Dup (1219314-BSD1)</u>					Prepared: 13-Aug-12 Analyzed: 14-Aug-12					
n-Nonadecane	4.38		mg/kg wet	0.333	6.67		66	40-140	3	25
n-Eicosane	4.46		mg/kg wet	0.333	6.67		67	40-140	2	25
n-Docosane	4.32		mg/kg wet	0.333	6.67		65	40-140	2	25
n-Tetracosane	4.30		mg/kg wet	0.333	6.67		64	40-140	3	25
n-Hexacosane	4.47		mg/kg wet	0.333	6.67		67	40-140	4	25
n-Octacosane	4.53		mg/kg wet	0.333	6.67		68	40-140	3	25
n-Triacontane	4.44		mg/kg wet	0.333	6.67		67	40-140	3	25
n-Hexatriacontane	4.54		mg/kg wet	0.333	6.67		68	40-140	4	25
Naphthalene (aliphatic fraction)	0.00		mg/kg wet					0-200		200
2-Methylnaphthalene (aliphatic fraction)	0.00		mg/kg wet					0-200		200
Surrogate: 1-Chlorooctadecane	2.19		mg/kg wet		3.33		66	40-140		
Surrogate: Ortho-Terphenyl	2.17		mg/kg wet		3.33		65	40-140		
Surrogate: 2-Fluorobiphenyl	1.98		mg/kg wet		2.67		74	40-140		
Naphthalene Breakthrough	0.00		%					0-5		
2-Methylnaphthalene Breakthrough	0.00		%					0-5		

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**General Chemistry Parameters - Quality Control**

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<b>Batch 1219574 - General Preparation</b>										
<u>Duplicate (1219574-DUP1)</u>				<u>Source: SB54305-01</u>		<u>Prepared: 15-Aug-12</u>	<u>Analyzed: 16-Aug-12</u>			
% Solids	82.1		%			85.0			3	20

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## Notes and Definitions

dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

A Matrix Spike and Matrix Spike Duplicate (MS/MSD) for MADEP EPH CAM may not have been analyzed with the samples in this work order. According to the method these spikes are performed only when requested by the client. If requested the spike recoveries are included in the batch QC data.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

Validated by:  
Kimberly Wisk



ALS Environmental Chain of Custody  
 1565 Jefferson Rd, Building 300 - Rochester, NY 14621 • 585-288-5180 • FAX 585-288-8475

ALS Contact: Michael Perry

Project Number: R1205125  
 Project Manager: Michael Perry

SR 8/18/12

Lab Code	Sample ID	# of Cont.	Matrix	Sample		Lab ID
				Date	Time	
R1205125-003	Roll Oil	1	Soil	8/3/12	1320	RJ Analytical

MA EPH  
MADEP EPH

5/1 30/12

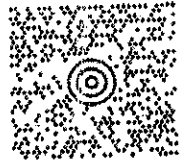
Special Instructions/Comments	Turnaround Requirements RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 X STANDARD Requested FAX Date: _____ Requested Report Date: 08/20/12	Report Requirements I. Results Only _____ X II. Results + QC Summaries III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data PQ, ANDL/D (DD) N Y	Invoice Information PO# R1205125 Bill to
	Requisitioned By: <u>[Signature]</u> Received By: <u>[Signature]</u> Airbill Number: <u>8/19/12</u> <u>03</u> <u>1000</u>		

SAC  
288-5390  
EHS ENVIRONMENTAL  
5645 JEFFERSON RD  
ROCHESTER NY 14623-3190

8 LBS

1 OF 2

SHIP TO:  
SMPL RECEIPT  
SPECTRUM ANALYTICAL  
11 ALMGREN DR  
AGAWAM MA 01001



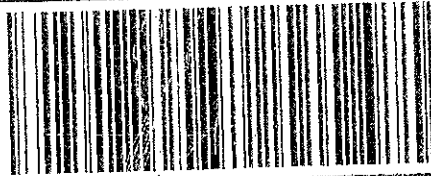
MA 011 9-08



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**Mike Perry**

**From:** Lisa Chaffee [Agawam] [lchaffee@spectrum-analytical.com]  
**Sent:** Wednesday, August 22, 2012 4:38 PM  
**To:** Mike Perry  
**Cc:** Jim Stadelmaier [Warwick]  
**Subject:** SB54305 - Report from Spectrum Analytical, Inc. for Project: See Chain of Custody  
**Attachments:** SB54305 FINAL 21 Aug 12 1132.PDF

**From:** online@spectrum-analytical.com [mailto:online@spectrum-analytical.com]  
**Posted At:** Friday, August 10, 2012 6:00 PM  
**Posted To:** Sample Confirmations  
**Conversation:** SB54305 - Sample confirmation from Spectrum Analytical, Inc. for Project: See Chain of Custody  
**Subject:** SB54305 - Sample confirmation from Spectrum Analytical, Inc. for Project: See Chain of Custody



**SPECTRUM ANALYTICAL, INC.**  
*Featuring*  
**HEANIBAL TECHNOLOGY**

This message is to notify you that your samples have been received by Spectrum Analytical, Inc. The Chain of Custody is attached. Please review the attached Sample Acknowledgment form for sample details. Please respond to this email to resolve any discrepancies or you may contact the Sample Department at (413) 789-9018 to discuss.

Work Order #: SB54305  
Project: See Chain of Custody  
Project #: R1205125  
Received: 08/09/2012 10:00 AM  
Estimated completion: 08/23/2012 5:00 PM  
Sample temperature: 0.8°C

You may track the status of your samples and view results on Spectrum's eServices website at <http://www.spectrum-analytical.com/eservices/>. If you do not have an online account, you may sign up for one by completing the Internet Access Agreement form located at the bottom of the login page.

If you have any questions or concerns about your samples, please reply to this message.

To ensure delivery of laboratory report notices, please add [online@spectrum-analytical.com](mailto:online@spectrum-analytical.com) to your address book.

8/22/2012

## COLUMBIA ANALYTICAL SERVICES, INC.

<b>Client:</b>	Shaw Environmental, Inc	<b>Service Request No.:</b>	R1205125
<b>Project:</b>	Varian Beverly	<b>Project Number:</b>	146898
<b>Sample Matrix:</b>	Waste Solid	<b>Date Received:</b>	8/08/12

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II, deliverables. When appropriate to the method, method blank results have been reported with each analytical test.

#### Sample Receipt

Waste samples were collected on 8/02/12 and 8/03/12 received at CAS in good condition on 8/08/12 at a cooler temperature of 2.6 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS cross-reference sheet for Client ID and CAS Lab ID #.

#### Volatile Organics

Three solid samples were analyzed for the Mass. CAM list of Volatile Organics by SW-846 Method 8260C. The samples were initially analyzed as medium level waste dilutions since the samples were collected in Terra Core vials.

All initial and continuing calibrations were compliant.

All Surrogate Standard recoveries were within QC limits.

The Blank Spike/Blank Spike Duplicates (LCS/LCSD) recoveries were all within the QC limits except the LCSD recovery for Diethyl Ether (134 %) and 1,1-Dichloroethene (68 %) were outside limits have been flagged with an "\*\*".

All samples were analyzed within the required holding times except as noted above.

No other analytical or QC problems were encountered with these analyses.

#### Semivolatile Organics

One soil sample was analyzed for the TCL list of SVOAs by SW-846 method 8270D.

All the initial and continuing calibration criteria were met for all analytes.

All internal standard areas were within QC limits.

All surrogate standard recoveries were within QC limits.

All blank spike recoveries (LCS/LCSD) were within QC limits.

The Method Blanks associated with these samples were free of contamination.

All sample extractions were done within the 14 day extraction holding time.

No other analytical or QC problems were encountered.

### **PCB Analysis**

One soil sample was analyzed for the TCL list of PCBs using SW-846 method 8082A.

All the initial and continuing calibration criteria were met for all analytes.

The Laboratory blanks associated with these samples were free of contamination.

All PCB surrogate standard recoveries were all with QC limits.

The Blank Spike (LCS/LCSD) recoveries were within QC limits.

All sample extractions were done within the 14 day extraction holding time.

No other analytical or QC problems were encountered.

### **Metals Analysis**

One solid waste sample was analyzed for TCLP Metals using methods 6010C/7470 following the TCLP Extraction by method 1311. One solid waste sample was analyzed for RCRA Metals using methods 6010C/7471B.

All blank spike recoveries (LCS) were within QC limits of 80 – 120 %.

No other analytical or QC problems were encountered.

### **EPH Analysis**

One soil sample was analyzed for MA EPH by the subcontract laboratory Spectrum Analytical, Inc. Their complete report is attached.

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R1205125

<u>Lab ID</u>	<u>Client ID</u>
R1205125-001	Trench 1 (Sanding Room)
R1205125-002	Trench 2 (Shipping)
R1205125-003	Roll Off
R1205125-004	Roll Off

## REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
- H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.



### CAS/Rochester Lab ID # for State Certifications<sup>1</sup>

NELAP Accredited	Nevada ID # NY-00032
Connecticut ID # PH0556	New Jersey ID # NY004
Delaware Accredited	New York ID # 10145
DoD ELAP #65817	New Hampshire ID # 294100 A/B
Florida ID # E87674	North Carolina #676
Illinois ID #200047	Pennsylvania ID# 68-786
Maine ID #NY0032	Rhode Island ID # 158
Nebraska Accredited	Virginia #460167

<sup>1</sup> Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to the certifications section at [www.caslab.com](http://www.caslab.com).

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil  
**Sample Name:** Trench 1 (Sanding Room)  
**Lab Code:** R1205125-001

**Service Request:** R1205125  
**Date Collected:** 8/ 2/12 1000  
**Date Received:** 8/ 8/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Solids, Total	160.3 Modified	89.0	Percent	1.0	1	NA	8/10/12 14:32	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** 8/ 2/12 1000  
**Date Received:** 8/ 8/12  
**Date Analyzed:** 8/13/12 17:05

**Sample Name:** Trench 1 (Sanding Room)  
**Lab Code:** R1205125-001

**Units:** µg/Kg  
**Basis:** Dry  
**Percent Solids:** 89.0

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\081312\E2504.D\

**Analysis Lot:** 304683  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 122

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	690	U	690	
71-55-6	1,1,1-Trichloroethane (TCA)	690	U	690	
79-34-5	1,1,2,2-Tetrachloroethane	690	U	690	
79-00-5	1,1,2-Trichloroethane	690	U	690	
75-34-3	1,1-Dichloroethane (1,1-DCA)	690	U	690	
75-35-4	1,1-Dichloroethene (1,1-DCE)	690	U	690	
563-58-6	1,1-Dichloropropene	690	U	690	
87-61-6	1,2,3-Trichlorobenzene	690	U	690	
96-18-4	1,2,3-Trichloropropane	690	U	690	
120-82-1	1,2,4-Trichlorobenzene	690	U	690	
95-63-6	1,2,4-Trimethylbenzene	690	U	690	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	690	U	690	
106-93-4	1,2-Dibromoethane	690	U	690	
95-50-1	1,2-Dichlorobenzene	690	U	690	
107-06-2	1,2-Dichloroethane	690	U	690	
78-87-5	1,2-Dichloropropane	690	U	690	
108-67-8	1,3,5-Trimethylbenzene	690	U	690	
541-73-1	1,3-Dichlorobenzene	690	U	690	
142-28-9	1,3-Dichloropropane	690	U	690	
106-46-7	1,4-Dichlorobenzene	690	U	690	
123-91-1	1,4-Dioxane	14000	U	14000	
594-20-7	2,2-Dichloropropane	690	U	690	
78-93-3	2-Butanone (MEK)	690	U	690	
95-49-8	2-Chlorotoluene	690	U	690	
591-78-6	2-Hexanone	690	U	690	
106-43-4	4-Chlorotoluene	690	U	690	
99-87-6	p-Isopropyltoluene	690	U	690	
108-10-1	4-Methyl-2-pentanone	690	U	690	
67-64-1	Acetone	690	U	690	
71-43-2	Benzene	690	U	690	
108-86-1	Bromobenzene	690	U	690	
74-97-5	Bromochloromethane	690	U	690	
75-27-4	Bromodichloromethane	690	U	690	
75-25-2	Bromoform	690	U	690	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** 8/ 2/12 1000  
**Date Received:** 8/ 8/12  
**Date Analyzed:** 8/13/12 17:05

**Sample Name:** Trench 1 (Sanding Room)  
**Lab Code:** R1205125-001

**Units:** µg/Kg  
**Basis:** Dry  
**Percent Solids:** 89.0

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\081312\E2504.D\

**Analysis Lot:** 304683  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 122

CAS No.	Analyte Name	Result	Q	MRL	Note
74-83-9	Bromomethane	690	U	690	
75-15-0	Carbon Disulfide	690	U	690	
56-23-5	Carbon Tetrachloride	690	U	690	
108-90-7	Chlorobenzene	690	U	690	
75-00-3	Chloroethane	690	U	690	
67-66-3	Chloroform	690	U	690	
74-87-3	Chloromethane	690	U	690	
124-48-1	Dibromochloromethane	690	U	690	
74-95-3	Dibromomethane	690	U	690	
75-71-8	Dichlorodifluoromethane (CFC 12)	690	U	690	
75-09-2	Dichloromethane	690	U	690	
60-29-7	Diethyl Ether	690	U	690	
108-20-3	Diisopropyl Ether	690	U	690	
637-92-3	Ethyl tert-Butyl Ether	690	U	690	
100-41-4	Ethylbenzene	690	U	690	
87-68-3	Hexachlorobutadiene	690	U	690	
98-82-8	Isopropylbenzene (Cumene)	690	U	690	
1634-04-4	Methyl tert-Butyl Ether	690	U	690	
91-20-3	Naphthalene	690	U	690	
100-42-5	Styrene	690	U	690	
127-18-4	Tetrachloroethene (PCE)	690	U	690	
109-99-9	Tetrahydrofuran (THF)	690	U	690	
108-88-3	Toluene	690	U	690	
79-01-6	Trichloroethene (TCE)	690	U	690	
75-69-4	Trichlorofluoromethane (CFC 11)	690	U	690	
75-01-4	Vinyl Chloride	690	U	690	
156-59-2	cis-1,2-Dichloroethene	690	U	690	
10061-01-5	cis-1,3-Dichloropropene	690	U	690	
179601-23-1	m,p-Xylenes	1400	U	1400	
104-51-8	n-Butylbenzene	690	U	690	
103-65-1	n-Propylbenzene	690	U	690	
95-47-6	o-Xylene	690	U	690	
135-98-8	sec-Butylbenzene	690	U	690	
994-05-8	tert-Amyl Methyl Ether	690	U	690	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** 8/ 2/12 1000  
**Date Received:** 8/ 8/12  
**Date Analyzed:** 8/13/12 17:05

**Sample Name:** Trench 1 (Sanding Room)  
**Lab Code:** R1205125-001

**Units:** µg/Kg  
**Basis:** Dry  
**Percent Solids:** 89.0

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\081312\E2504.D\

**Analysis Lot:** 304683  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 122

CAS No.	Analyte Name	Result	Q	MRL	Note
98-06-6	tert-Butylbenzene	690	U	690	
156-60-5	trans-1,2-Dichloroethene	690	U	690	
10061-02-6	trans-1,3-Dichloropropene	690	U	690	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	8/13/12 17:05	
Dibromofluoromethane	98	70-130	8/13/12 17:05	
Toluene-d8	101	70-130	8/13/12 17:05	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil  
**Sample Name:** Trench 2 (Shipping)  
**Lab Code:** R1205125-002

**Service Request:** R1205125  
**Date Collected:** 8/ 2/12 1200  
**Date Received:** 8/ 8/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Solids, Total	160.3 Modified	92.7	Percent	1.0	1	NA	8/10/12 14:32	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** 8/ 2/12 1200  
**Date Received:** 8/ 8/12  
**Date Analyzed:** 8/13/12 17:35

**Sample Name:** Trench 2 (Shipping)  
**Lab Code:** R1205125-002

**Units:** µg/Kg  
**Basis:** Dry  
**Percent Solids:** 92.7

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\081312\E2505.D\

**Analysis Lot:** 304683  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 86

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	460	U	460	
71-55-6	1,1,1-Trichloroethane (TCA)	460	U	460	
79-34-5	1,1,2,2-Tetrachloroethane	460	U	460	
79-00-5	1,1,2-Trichloroethane	460	U	460	
75-34-3	1,1-Dichloroethane (1,1-DCA)	460	U	460	
75-35-4	1,1-Dichloroethene (1,1-DCE)	460	U	460	
563-58-6	1,1-Dichloropropene	460	U	460	
87-61-6	1,2,3-Trichlorobenzene	460	U	460	
96-18-4	1,2,3-Trichloropropane	460	U	460	
120-82-1	1,2,4-Trichlorobenzene	460	U	460	
95-63-6	1,2,4-Trimethylbenzene	460	U	460	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	460	U	460	
106-93-4	1,2-Dibromoethane	460	U	460	
95-50-1	1,2-Dichlorobenzene	460	U	460	
107-06-2	1,2-Dichloroethane	460	U	460	
78-87-5	1,2-Dichloropropane	460	U	460	
108-67-8	1,3,5-Trimethylbenzene	460	U	460	
541-73-1	1,3-Dichlorobenzene	460	U	460	
142-28-9	1,3-Dichloropropane	460	U	460	
106-46-7	1,4-Dichlorobenzene	460	U	460	
123-91-1	1,4-Dioxane	9300	U	9300	
594-20-7	2,2-Dichloropropane	460	U	460	
78-93-3	2-Butanone (MEK)	460	U	460	
95-49-8	2-Chlorotoluene	460	U	460	
591-78-6	2-Hexanone	460	U	460	
106-43-4	4-Chlorotoluene	460	U	460	
99-87-6	p-Isopropyltoluene	460	U	460	
108-10-1	4-Methyl-2-pentanone	460	U	460	
67-64-1	Acetone	460	U	460	
71-43-2	Benzene	460	U	460	
108-86-1	Bromobenzene	460	U	460	
74-97-5	Bromochloromethane	460	U	460	
75-27-4	Bromodichloromethane	460	U	460	
75-25-2	Bromoform	460	U	460	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** 8/ 2/12 1200  
**Date Received:** 8/ 8/12  
**Date Analyzed:** 8/13/12 17:35

**Sample Name:** Trench 2 (Shipping)  
**Lab Code:** R1205125-002

**Units:** µg/Kg  
**Basis:** Dry  
**Percent Solids:** 92.7

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\081312\E2505.D\

**Analysis Lot:** 304683  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 86

CAS No.	Analyte Name	Result	Q	MRL	Note
74-83-9	Bromomethane	460	U	460	
75-15-0	Carbon Disulfide	460	U	460	
56-23-5	Carbon Tetrachloride	460	U	460	
108-90-7	Chlorobenzene	460	U	460	
75-00-3	Chloroethane	460	U	460	
67-66-3	Chloroform	460	U	460	
74-87-3	Chloromethane	460	U	460	
124-48-1	Dibromochloromethane	460	U	460	
74-95-3	Dibromomethane	460	U	460	
75-71-8	Dichlorodifluoromethane (CFC 12)	460	U	460	
75-09-2	Dichloromethane	460	U	460	
60-29-7	Diethyl Ether	460	U	460	
108-20-3	Diisopropyl Ether	460	U	460	
637-92-3	Ethyl tert-Butyl Ether	460	U	460	
100-41-4	Ethylbenzene	460	U	460	
87-68-3	Hexachlorobutadiene	460	U	460	
98-82-8	Isopropylbenzene (Cumene)	460	U	460	
1634-04-4	Methyl tert-Butyl Ether	460	U	460	
91-20-3	Naphthalene	460	U	460	
100-42-5	Styrene	460	U	460	
127-18-4	Tetrachloroethene (PCE)	460	U	460	
109-99-9	Tetrahydrofuran (THF)	460	U	460	
108-88-3	Toluene	460	U	460	
79-01-6	Trichloroethene (TCE)	460	U	460	
75-69-4	Trichlorofluoromethane (CFC 11)	460	U	460	
75-01-4	Vinyl Chloride	460	U	460	
156-59-2	cis-1,2-Dichloroethene	460	U	460	
10061-01-5	cis-1,3-Dichloropropene	460	U	460	
179601-23-1	m,p-Xylenes	930	U	930	
104-51-8	n-Butylbenzene	460	U	460	
103-65-1	n-Propylbenzene	460	U	460	
95-47-6	o-Xylene	460	U	460	
135-98-8	sec-Butylbenzene	460	U	460	
994-05-8	tert-Amyl Methyl Ether	460	U	460	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly - Soil/146898  
Sample Matrix: Soil

Service Request: R1205125  
Date Collected: 8/ 2/12 1200  
Date Received: 8/ 8/12  
Date Analyzed: 8/13/12 17:35

Sample Name: Trench 2 (Shipping)  
Lab Code: R1205125-002

Units: µg/Kg  
Basis: Dry  
Percent Solids: 92.7

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C  
Data File Name: J:\ACQUDATA\msvoa10\data\081312\E2505.D\

Analysis Lot: 304683  
Instrument Name: R-MS-10  
Dilution Factor: 86

CAS No.	Analyte Name	Result	Q	MRL	Note
98-06-6	tert-Butylbenzene	460	U	460	
156-60-5	trans-1,2-Dichloroethene	460	U	460	
10061-02-6	trans-1,3-Dichloropropene	460	U	460	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	8/13/12 17:35	
Dibromofluoromethane	97	70-130	8/13/12 17:35	
Toluene-d8	101	70-130	8/13/12 17:35	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil  
**Sample Name:** Roll Off  
**Lab Code:** R1205125-003

**Service Request:** R1205125  
**Date Collected:** 8/ 3/12 1320  
**Date Received:** 8/ 8/12

**Basis:** As Received

**General Chemistry Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Solids, Total	160.3 Modified	82.7		Percent	1.0	1	NA	8/10/12 14:32	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil  
**Sample Name:** Roll Off  
**Lab Code:** R1205125-003

**Service Request:** R1205125  
**Date Collected:** 8/ 3/12 1320  
**Date Received:** 8/ 8/12

**Basis:** Dry  
**Percent Solids:** 82.7

**Inorganic Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	6.7		mg/Kg	1.2	1	8/16/12	8/22/12 14:17	
Barium, Total	6010C	27.7		mg/Kg	2.4	1	8/16/12	8/22/12 14:17	
Cadmium, Total	6010C	0.60	U	mg/Kg	0.60	1	8/16/12	8/22/12 14:17	
Chromium, Total	6010C	15.7		mg/Kg	1.2	1	8/16/12	8/22/12 14:17	
Lead, Total	6010C	7.4		mg/Kg	6.0	1	8/16/12	8/22/12 14:17	
Mercury, Total	7471B	0.040	U	mg/Kg	0.040	1	8/21/12	8/22/12 09:01	
Selenium, Total	6010C	1.2	U	mg/Kg	1.2	1	8/16/12	8/22/12 14:17	
Silver, Total	6010C	1.2	U	mg/Kg	1.2	1	8/16/12	8/22/12 14:17	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** 8/ 3/12 1320  
**Date Received:** 8/ 8/12  
**Date Analyzed:** 8/16/12 18:24

**Sample Name:** Roll Off  
**Lab Code:** R1205125-003

**Units:** µg/Kg  
**Basis:** Dry  
**Percent Solids:** 82.7

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\081612\E2603.D\

**Analysis Lot:** 305295  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 133.5

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	810	U	810	
71-55-6	1,1,1-Trichloroethane (TCA)	810	U	810	
79-34-5	1,1,2,2-Tetrachloroethane	810	U	810	
79-00-5	1,1,2-Trichloroethane	810	U	810	
75-34-3	1,1-Dichloroethane (1,1-DCA)	810	U	810	
75-35-4	1,1-Dichloroethene (1,1-DCE)	810	U	810	
563-58-6	1,1-Dichloropropene	810	U	810	
87-61-6	1,2,3-Trichlorobenzene	810	U	810	
96-18-4	1,2,3-Trichloropropane	810	U	810	
120-82-1	1,2,4-Trichlorobenzene	810	U	810	
95-63-6	1,2,4-Trimethylbenzene	6700		810	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	810	U	810	
106-93-4	1,2-Dibromoethane	810	U	810	
95-50-1	1,2-Dichlorobenzene	810	U	810	
107-06-2	1,2-Dichloroethane	810	U	810	
78-87-5	1,2-Dichloropropane	810	U	810	
108-67-8	1,3,5-Trimethylbenzene	1700		810	
541-73-1	1,3-Dichlorobenzene	810	U	810	
142-28-9	1,3-Dichloropropane	810	U	810	
106-46-7	1,4-Dichlorobenzene	810	U	810	
123-91-1	1,4-Dioxane	16000	U	16000	
594-20-7	2,2-Dichloropropane	810	U	810	
78-93-3	2-Butanone (MEK)	810	U	810	
95-49-8	2-Chlorotoluene	810	U	810	
591-78-6	2-Hexanone	810	U	810	
106-43-4	4-Chlorotoluene	810	U	810	
99-87-6	p-Isopropyltoluene	810	U	810	
108-10-1	4-Methyl-2-pentanone	810	U	810	
67-64-1	Acetone	810	U	810	
71-43-2	Benzene	810	U	810	
108-86-1	Bromobenzene	810	U	810	
74-97-5	Bromochloromethane	810	U	810	
75-27-4	Bromodichloromethane	810	U	810	
75-25-2	Bromoform	810	U	810	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** 8/ 3/12 1320  
**Date Received:** 8/ 8/12  
**Date Analyzed:** 8/16/12 18:24

**Sample Name:** Roll Off  
**Lab Code:** R1205125-003

**Units:** µg/Kg  
**Basis:** Dry  
**Percent Solids:** 82.7

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\081612\E2603.D\

**Analysis Lot:** 305295  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 133.5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-83-9	Bromomethane	810	U	810	
75-15-0	Carbon Disulfide	810	U	810	
56-23-5	Carbon Tetrachloride	810	U	810	
108-90-7	Chlorobenzene	810	U	810	
75-00-3	Chloroethane	810	U	810	
67-66-3	Chloroform	810	U	810	
74-87-3	Chloromethane	810	U	810	
124-48-1	Dibromochloromethane	810	U	810	
74-95-3	Dibromomethane	810	U	810	
75-71-8	Dichlorodifluoromethane (CFC 12)	810	U	810	
75-09-2	Dichloromethane	810	U	810	
60-29-7	Diethyl Ether	810	U	810	
108-20-3	Diisopropyl Ether	810	U	810	
637-92-3	Ethyl tert-Butyl Ether	810	U	810	
100-41-4	Ethylbenzene	810	U	810	
87-68-3	Hexachlorobutadiene	810	U	810	
98-82-8	Isopropylbenzene (Cumene)	810	U	810	
1634-04-4	Methyl tert-Butyl Ether	810	U	810	
91-20-3	Naphthalene	6200		810	
100-42-5	Styrene	810	U	810	
127-18-4	Tetrachloroethene (PCE)	810	U	810	
109-99-9	Tetrahydrofuran (THF)	810	U	810	
108-88-3	Toluene	810	U	810	
79-01-6	Trichloroethene (TCE)	810	U	810	
75-69-4	Trichlorofluoromethane (CFC 11)	810	U	810	
75-01-4	Vinyl Chloride	810	U	810	
156-59-2	cis-1,2-Dichloroethene	810	U	810	
10061-01-5	cis-1,3-Dichloropropene	810	U	810	
179601-23-1	m,p-Xylenes	1700		1600	
104-51-8	n-Butylbenzene	1500		810	
103-65-1	n-Propylbenzene	810	U	810	
95-47-6	o-Xylene	980		810	
135-98-8	sec-Butylbenzene	810	U	810	
994-05-8	tert-Amyl Methyl Ether	810	U	810	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** 8/ 3/12 1320  
**Date Received:** 8/ 8/12  
**Date Analyzed:** 8/16/12 18:24

**Sample Name:** Roll Off  
**Lab Code:** R1205125-003

**Units:** µg/Kg  
**Basis:** Dry  
**Percent Solids:** 82.7

Volatile Organic Compounds by GC/MS

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\081612\E2603.D\

**Analysis Lot:** 305295  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 133.5

CAS No.	Analyte Name	Result	Q	MRL	Note
98-06-6	tert-Butylbenzene	810	U	810	
156-60-5	trans-1,2-Dichloroethene	810	U	810	
10061-02-6	trans-1,3-Dichloropropene	810	U	810	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	8/16/12 18:24	
Dibromofluoromethane	95	70-130	8/16/12 18:24	
Toluene-d8	101	70-130	8/16/12 18:24	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** 8/ 3/12 1320  
**Date Received:** 8/ 8/12  
**Date Extracted:** 8/9/12  
**Date Analyzed:** 8/10/12 15:36

**Sample Name:** Roll Off  
**Lab Code:** R1205125-003

**Units:** µg/Kg  
**Basis:** Dry  
**Percent Solids:** 82.7

**Semivolatile Organic Compounds by GC/MS**

**Analytical Method:** 8270D  
**Prep Method:** EPA 3541  
**Data File Name:** J:\ACQUADATA\5973D\DATA\081012\AL227.D\

**Analysis Lot:** 304562  
**Extraction Lot:** 164317  
**Instrument Name:** R-MS-54  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	400	U	400	
95-50-1	1,2-Dichlorobenzene	400	U	400	
541-73-1	1,3-Dichlorobenzene	400	U	400	
106-46-7	1,4-Dichlorobenzene	400	U	400	
95-95-4	2,4,5-Trichlorophenol	400	U	400	
88-06-2	2,4,6-Trichlorophenol	400	U	400	
120-83-2	2,4-Dichlorophenol	400	U	400	
105-67-9	2,4-Dimethylphenol	400	U	400	
51-28-5	2,4-Dinitrophenol	2100	U	2100	
121-14-2	2,4-Dinitrotoluene	400	U	400	
606-20-2	2,6-Dinitrotoluene	400	U	400	
91-58-7	2-Chloronaphthalene	400	U	400	
95-57-8	2-Chlorophenol	400	U	400	
91-57-6	2-Methylnaphthalene	4500		400	
95-48-7	2-Methylphenol	400	U	400	
88-74-4	2-Nitroaniline	2100	U	2100	
88-75-5	2-Nitrophenol	400	U	400	
91-94-1	3,3'-Dichlorobenzidine	400	U	400	
	3- and 4-Methylphenol Coelution	400	U	400	
99-09-2	3-Nitroaniline	2100	U	2100	
534-52-1	4,6-Dinitro-2-methylphenol	2100	U	2100	
101-55-3	4-Bromophenyl Phenyl Ether	400	U	400	
59-50-7	4-Chloro-3-methylphenol	400	U	400	
106-47-8	4-Chloroaniline	400	U	400	
7005-72-3	4-Chlorophenyl Phenyl Ether	400	U	400	
100-01-6	4-Nitroaniline	2100	U	2100	
100-02-7	4-Nitrophenol	2100	U	2100	
83-32-9	Acenaphthene	600		400	
208-96-8	Acenaphthylene	400	U	400	
120-12-7	Anthracene	400	U	400	
56-55-3	Benz(a)anthracene	400	U	400	
50-32-8	Benzo(a)pyrene	400	U	400	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** 8/ 3/12 1320  
**Date Received:** 8/ 8/12  
**Date Extracted:** 8/9/12  
**Date Analyzed:** 8/10/12 15:36

**Sample Name:** Roll Off  
**Lab Code:** R1205125-003

**Units:** µg/Kg  
**Basis:** Dry  
**Percent Solids:** 82.7

**Semivolatile Organic Compounds by GC/MS**

**Analytical Method:** 8270D  
**Prep Method:** EPA 3541  
**Data File Name:** J:\ACQUADATA\5973D\DATA\081012\AL227.D\

**Analysis Lot:** 304562  
**Extraction Lot:** 164317  
**Instrument Name:** R-MS-54  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
205-99-2	Benzo(b)fluoranthene	400	U	400	
191-24-2	Benzo(g,h,i)perylene	400	U	400	
207-08-9	Benzo(k)fluoranthene	400	U	400	
100-51-6	Benzyl Alcohol	400	U	400	
108-60-1	2,2'-Oxybis(1-chloropropane)	400	U	400	
111-91-1	Bis(2-chloroethoxy)methane	400	U	400	
111-44-4	Bis(2-chloroethyl) Ether	400	U	400	
117-81-7	Bis(2-ethylhexyl) Phthalate	400	U	400	
85-68-7	Butyl Benzyl Phthalate	400	U	400	
86-74-8	Carbazole	400	U	400	
218-01-9	Chrysene	400	U	400	
84-74-2	Di-n-butyl Phthalate	400	U	400	
117-84-0	Di-n-octyl Phthalate	400	U	400	
53-70-3	Dibenz(a,h)anthracene	400	U	400	
132-64-9	Dibenzofuran	400	U	400	
84-66-2	Diethyl Phthalate	400	U	400	
131-11-3	Dimethyl Phthalate	400	U	400	
206-44-0	Fluoranthene	400	U	400	
86-73-7	Fluorene	920		400	
118-74-1	Hexachlorobenzene	400	U	400	
87-68-3	Hexachlorobutadiene	400	U	400	
77-47-4	Hexachlorocyclopentadiene	400	U	400	
67-72-1	Hexachloroethane	400	U	400	
193-39-5	Indeno(1,2,3-cd)pyrene	400	U	400	
78-59-1	Isophorone	400	U	400	
621-64-7	N-Nitrosodi-n-propylamine	400	U	400	
62-75-9	N-Nitrosodimethylamine	400	U	400	
86-30-6	N-Nitrosodiphenylamine	400	U	400	
91-20-3	Naphthalene	400	U	400	
98-95-3	Nitrobenzene	400	U	400	
87-86-5	Pentachlorophenol (PCP)	2100	U	2100	
85-01-8	Phenanthrene	2700		400	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** 8/ 3/12 1320  
**Date Received:** 8/ 8/12  
**Date Extracted:** 8/9/12  
**Date Analyzed:** 8/10/12 15:36

**Sample Name:** Roll Off  
**Lab Code:** R1205125-003

**Units:** µg/Kg  
**Basis:** Dry  
**Percent Solids:** 82.7

**Semivolatile Organic Compounds by GC/MS**

**Analytical Method:** 8270D  
**Prep Method:** EPA 3541  
**Data File Name:** J:\ACQU\DATA\5973D\DATA\081012\AL227.D\

**Analysis Lot:** 304562  
**Extraction Lot:** 164317  
**Instrument Name:** R-MS-54  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
108-95-2	Phenol	400	U	400	
129-00-0	Pyrene	400	U	400	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	85	30-130	8/10/12 15:36	
2-Fluorobiphenyl	75	30-130	8/10/12 15:36	
2-Fluorophenol	75	30-130	8/10/12 15:36	
Nitrobenzene-d5	78	30-130	8/10/12 15:36	
Phenol-d6	87	30-130	8/10/12 15:36	
p-Terphenyl-d14	111	30-130	8/10/12 15:36	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** 8/ 3/12 1320  
**Date Received:** 8/ 8/12  
**Date Extracted:** 8/13/12  
**Date Analyzed:** 8/15/12 02:03

**Sample Name:** Roll Off  
**Lab Code:** R1205125-003

**Units:** µg/Kg  
**Basis:** Dry  
**Percent Solids:** 82.7

**Polychlorinated Biphenyls (PCBs) by GC**

**Analytical Method:** 8082A  
**Prep Method:** EPA 3541  
**Data File Name:** J:\ACQUDATA\6890G\DATA\081412\AS185.D\

**Analysis Lot:** 305036  
**Extraction Lot:** 164560  
**Instrument Name:** R-GC-58  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
12674-11-2	Aroclor 1016	40	U	40	
11104-28-2	Aroclor 1221	81	U	81	
11141-16-5	Aroclor 1232	40	U	40	
53469-21-9	Aroclor 1242	40	U	40	
12672-29-6	Aroclor 1248	40	U	40	
11097-69-1	Aroclor 1254	40	U	40	
11096-82-5	Aroclor 1260	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	59	30-150	8/15/12 02:03	
Tetrachloro-m-xylene	44	30-150	8/15/12 02:03	



COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly - Soil/146898  
Sample Matrix: Soil

Service Request: R1205125  
Date Collected: 8/ 3/12 1320  
Date Received: 8/ 8/12  
Pre-Prep Date: 8/10/12

Sample Name: Roll Off  
Lab Code: R1205125-004

Basis: As Received

Toxicity Characteristics Leachate Procedure (TCLP)  
Inorganic Parameters

Pre-Prep Method: EPA 1311

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic	6010C	0.50 U	mg/L	0.50	1	8/16/12	8/22/12 16:06	
Barium	6010C	1.0 U	mg/L	1.0	1	8/16/12	8/22/12 16:06	
Cadmium	6010C	0.10 U	mg/L	0.10	1	8/16/12	8/22/12 16:06	
Chromium	6010C	0.10 U	mg/L	0.10	1	8/16/12	8/22/12 16:06	
Lead	6010C	0.10 U	mg/L	0.10	1	8/16/12	8/22/12 16:06	
Mercury	7470A	0.00030 U	mg/L	0.00030	1	8/17/12	8/17/12 15:05	
Selenium	6010C	0.50 U	mg/L	0.50	1	8/16/12	8/22/12 16:06	
Silver	6010C	0.10 U	mg/L	0.10	1	8/16/12	8/22/12 16:06	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil  
**Sample Name:** Method Blank  
**Lab Code:** R1205125-MB

**Service Request:** R1205125  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** As Received

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Solids, Total	160.3 Modified	1.0	U	Percent	1.0	1	NA	8/10/12 14:32	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** NA  
**Date Received:** NA  
**Pre-Prep Date:** 8/10/12

**Sample Name:** Method Blank  
**Lab Code:** R1205125-MB1

**Basis:** As Received

**Toxicity Characteristics Leachate Procedure (TCLP)  
 Inorganic Parameters**

**Pre-Prep Method:** EPA 1311

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic	6010C	0.50	U	mg/L	0.50	1	8/16/12	8/22/12 15:37	
Barium	6010C	1.0	U	mg/L	1.0	1	8/16/12	8/22/12 15:37	
Cadmium	6010C	0.10	U	mg/L	0.10	1	8/16/12	8/22/12 15:37	
Chromium	6010C	0.10	U	mg/L	0.10	1	8/16/12	8/22/12 15:37	
Lead	6010C	0.10	U	mg/L	0.10	1	8/16/12	8/22/12 15:37	
Mercury	7470A	0.00030	U	mg/L	0.00030	1	8/17/12	8/17/12 15:03	
Selenium	6010C	0.50	U	mg/L	0.50	1	8/16/12	8/22/12 15:37	
Silver	6010C	0.10	U	mg/L	0.10	1	8/16/12	8/22/12 15:37	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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## Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil  
**Sample Name:** Method Blank  
**Lab Code:** R1205125-MB2

**Service Request:** R1205125  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** As Received**Inorganic Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Arsenic	6010C	0.50	U	mg/L	0.50	1	8/16/12	8/22/12 15:43	
Barium	6010C	1.0	U	mg/L	1.0	1	8/16/12	8/22/12 15:43	
Cadmium	6010C	0.10	U	mg/L	0.10	1	8/16/12	8/22/12 15:43	
Chromium	6010C	0.10	U	mg/L	0.10	1	8/16/12	8/22/12 15:43	
Lead	6010C	0.10	U	mg/L	0.10	1	8/16/12	8/22/12 15:43	
Mercury	7470A	0.00030	U	mg/L	0.00030	1	8/17/12	8/17/12 14:59	
Selenium	6010C	0.50	U	mg/L	0.50	1	8/16/12	8/22/12 15:43	
Silver	6010C	0.10	U	mg/L	0.10	1	8/16/12	8/22/12 15:43	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil  
**Sample Name:** Method Blank  
**Lab Code:** R1205125-MB2

**Service Request:** R1205125  
**Date Collected:** NA  
**Date Received:** NA

**Basis:** Dry

**Inorganic Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Arsenic, Total	6010C	1.0	U	mg/Kg	1.0	1	8/16/12	8/22/12 13:33	
Barium, Total	6010C	2.0	U	mg/Kg	2.0	1	8/16/12	8/22/12 13:33	
Cadmium, Total	6010C	0.50	U	mg/Kg	0.50	1	8/16/12	8/22/12 13:33	
Chromium, Total	6010C	1.0	U	mg/Kg	1.0	1	8/16/12	8/22/12 13:33	
Lead, Total	6010C	5.0	U	mg/Kg	5.0	1	8/16/12	8/22/12 13:33	
Mercury, Total	7471B	0.033	U	mg/Kg	0.033	1	8/21/12	8/22/12 08:58	
Selenium, Total	6010C	1.0	U	mg/Kg	1.0	1	8/16/12	8/22/12 13:33	
Silver, Total	6010C	1.0	U	mg/Kg	1.0	1	8/16/12	8/22/12 13:33	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 8/13/12 13:06

**Sample Name:** Method Blank  
**Lab Code:** RQ1209521-01

**Units:** µg/Kg  
**Basis:** Dry

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\081312\E2496.D\

**Analysis Lot:** 304683  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	250	U	250	
71-55-6	1,1,1-Trichloroethane (TCA)	250	U	250	
79-34-5	1,1,2,2-Tetrachloroethane	250	U	250	
79-00-5	1,1,2-Trichloroethane	250	U	250	
75-34-3	1,1-Dichloroethane (1,1-DCA)	250	U	250	
75-35-4	1,1-Dichloroethene (1,1-DCE)	250	U	250	
563-58-6	1,1-Dichloropropene	250	U	250	
87-61-6	1,2,3-Trichlorobenzene	250	U	250	
96-18-4	1,2,3-Trichloropropane	250	U	250	
120-82-1	1,2,4-Trichlorobenzene	250	U	250	
95-63-6	1,2,4-Trimethylbenzene	250	U	250	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	250	U	250	
106-93-4	1,2-Dibromoethane	250	U	250	
95-50-1	1,2-Dichlorobenzene	250	U	250	
107-06-2	1,2-Dichloroethane	250	U	250	
78-87-5	1,2-Dichloropropane	250	U	250	
108-67-8	1,3,5-Trimethylbenzene	250	U	250	
541-73-1	1,3-Dichlorobenzene	250	U	250	
142-28-9	1,3-Dichloropropane	250	U	250	
106-46-7	1,4-Dichlorobenzene	250	U	250	
123-91-1	1,4-Dioxane	5000	U	5000	
594-20-7	2,2-Dichloropropane	250	U	250	
78-93-3	2-Butanone (MEK)	250	U	250	
95-49-8	2-Chlorotoluene	250	U	250	
591-78-6	2-Hexanone	250	U	250	
106-43-4	4-Chlorotoluene	250	U	250	
99-87-6	p-Isopropyltoluene	250	U	250	
108-10-1	4-Methyl-2-pentanone	250	U	250	
67-64-1	Acetone	250	U	250	
71-43-2	Benzene	250	U	250	
108-86-1	Bromobenzene	250	U	250	
74-97-5	Bromochloromethane	250	U	250	
75-27-4	Bromodichloromethane	250	U	250	
75-25-2	Bromoform	250	U	250	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 8/13/12 13:06

**Sample Name:** Method Blank  
**Lab Code:** RQ1209521-01

**Units:** µg/Kg  
**Basis:** Dry

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\081312\E2496.D\

**Analysis Lot:** 304683  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result	Q	MRL	Note
74-83-9	Bromomethane	250	U	250	
75-15-0	Carbon Disulfide	250	U	250	
56-23-5	Carbon Tetrachloride	250	U	250	
108-90-7	Chlorobenzene	250	U	250	
75-00-3	Chloroethane	250	U	250	
67-66-3	Chloroform	250	U	250	
74-87-3	Chloromethane	250	U	250	
124-48-1	Dibromochloromethane	250	U	250	
74-95-3	Dibromomethane	250	U	250	
75-71-8	Dichlorodifluoromethane (CFC 12)	250	U	250	
75-09-2	Dichloromethane	250	U	250	
60-29-7	Diethyl Ether	250	U	250	
108-20-3	Diisopropyl Ether	250	U	250	
637-92-3	Ethyl tert-Butyl Ether	250	U	250	
100-41-4	Ethylbenzene	250	U	250	
87-68-3	Hexachlorobutadiene	250	U	250	
98-82-8	Isopropylbenzene (Cumene)	250	U	250	
1634-04-4	Methyl tert-Butyl Ether	250	U	250	
91-20-3	Naphthalene	250	U	250	
100-42-5	Styrene	250	U	250	
127-18-4	Tetrachloroethene (PCE)	250	U	250	
109-99-9	Tetrahydrofuran (THF)	250	U	250	
108-88-3	Toluene	250	U	250	
79-01-6	Trichloroethene (TCE)	250	U	250	
75-69-4	Trichlorofluoromethane (CFC 11)	250	U	250	
75-01-4	Vinyl Chloride	250	U	250	
156-59-2	cis-1,2-Dichloroethene	250	U	250	
10061-01-5	cis-1,3-Dichloropropene	250	U	250	
179601-23-1	m,p-Xylenes	500	U	500	
104-51-8	n-Butylbenzene	250	U	250	
103-65-1	n-Propylbenzene	250	U	250	
95-47-6	o-Xylene	250	U	250	
135-98-8	sec-Butylbenzene	250	U	250	
994-05-8	tert-Amyl Methyl Ether	250	U	250	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly - Soil/146898  
Sample Matrix: Soil

Service Request: R1205125  
Date Collected: NA  
Date Received: NA  
Date Analyzed: 8/13/12 13:06

Sample Name: Method Blank  
Lab Code: RQ1209521-01

Units: µg/Kg  
Basis: Dry

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C  
Data File Name: J:\ACQUDATA\msvoa10\data\081312\E2496.D\

Analysis Lot: 304683  
Instrument Name: R-MS-10  
Dilution Factor: 50

CAS No.	Analyte Name	Result	Q	MRL	Note
98-06-6	tert-Butylbenzene	250	U	250	
156-60-5	trans-1,2-Dichloroethene	250	U	250	
10061-02-6	trans-1,3-Dichloropropene	250	U	250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	8/13/12 13:06	
Dibromofluoromethane	99	70-130	8/13/12 13:06	
Toluene-d8	102	70-130	8/13/12 13:06	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 8/16/12 15:55

**Sample Name:** Method Blank  
**Lab Code:** RQ1209639-01

**Units:** µg/Kg  
**Basis:** Dry

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\081612\E2598.D\

**Analysis Lot:** 305295  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result	Q	MRL	Note
630-20-6	1,1,1,2-Tetrachloroethane	250	U	250	
71-55-6	1,1,1-Trichloroethane (TCA)	250	U	250	
79-34-5	1,1,2,2-Tetrachloroethane	250	U	250	
79-00-5	1,1,2-Trichloroethane	250	U	250	
75-34-3	1,1-Dichloroethane (1,1-DCA)	250	U	250	
75-35-4	1,1-Dichloroethene (1,1-DCE)	250	U	250	
563-58-6	1,1-Dichloropropene	250	U	250	
87-61-6	1,2,3-Trichlorobenzene	250	U	250	
96-18-4	1,2,3-Trichloropropane	250	U	250	
120-82-1	1,2,4-Trichlorobenzene	250	U	250	
95-63-6	1,2,4-Trimethylbenzene	250	U	250	
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)	250	U	250	
106-93-4	1,2-Dibromoethane	250	U	250	
95-50-1	1,2-Dichlorobenzene	250	U	250	
107-06-2	1,2-Dichloroethane	250	U	250	
78-87-5	1,2-Dichloropropane	250	U	250	
108-67-8	1,3,5-Trimethylbenzene	250	U	250	
541-73-1	1,3-Dichlorobenzene	250	U	250	
142-28-9	1,3-Dichloropropane	250	U	250	
106-46-7	1,4-Dichlorobenzene	250	U	250	
123-91-1	1,4-Dioxane	5000	U	5000	
594-20-7	2,2-Dichloropropane	250	U	250	
78-93-3	2-Butanone (MEK)	250	U	250	
95-49-8	2-Chlorotoluene	250	U	250	
591-78-6	2-Hexanone	250	U	250	
106-43-4	4-Chlorotoluene	250	U	250	
99-87-6	p-Isopropyltoluene	250	U	250	
108-10-1	4-Methyl-2-pentanone	250	U	250	
67-64-1	Acetone	250	U	250	
71-43-2	Benzene	250	U	250	
108-86-1	Bromobenzene	250	U	250	
74-97-5	Bromochloromethane	250	U	250	
75-27-4	Bromodichloromethane	250	U	250	
75-25-2	Bromoform	250	U	250	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 8/16/12 15:55

**Sample Name:** Method Blank  
**Lab Code:** RQ1209639-01

**Units:** µg/Kg  
**Basis:** Dry

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa10\data\081612\E2598.D\

**Analysis Lot:** 305295  
**Instrument Name:** R-MS-10  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result	Q	MRL	Note
74-83-9	Bromomethane	250	U	250	
75-15-0	Carbon Disulfide	250	U	250	
56-23-5	Carbon Tetrachloride	250	U	250	
108-90-7	Chlorobenzene	250	U	250	
75-00-3	Chloroethane	250	U	250	
67-66-3	Chloroform	250	U	250	
74-87-3	Chloromethane	250	U	250	
124-48-1	Dibromochloromethane	250	U	250	
74-95-3	Dibromomethane	250	U	250	
75-71-8	Dichlorodifluoromethane (CFC 12)	250	U	250	
75-09-2	Dichloromethane	250	U	250	
60-29-7	Diethyl Ether	250	U	250	
108-20-3	Diisopropyl Ether	250	U	250	
637-92-3	Ethyl tert-Butyl Ether	250	U	250	
100-41-4	Ethylbenzene	250	U	250	
87-68-3	Hexachlorobutadiene	250	U	250	
98-82-8	Isopropylbenzene (Cumene)	250	U	250	
1634-04-4	Methyl tert-Butyl Ether	250	U	250	
91-20-3	Naphthalene	250	U	250	
100-42-5	Styrene	250	U	250	
127-18-4	Tetrachloroethene (PCE)	250	U	250	
109-99-9	Tetrahydrofuran (THF)	250	U	250	
108-88-3	Toluene	250	U	250	
79-01-6	Trichloroethene (TCE)	250	U	250	
75-69-4	Trichlorofluoromethane (CFC 11)	250	U	250	
75-01-4	Vinyl Chloride	250	U	250	
156-59-2	cis-1,2-Dichloroethene	250	U	250	
10061-01-5	cis-1,3-Dichloropropene	250	U	250	
179601-23-1	m,p-Xylenes	500	U	500	
104-51-8	n-Butylbenzene	250	U	250	
103-65-1	n-Propylbenzene	250	U	250	
95-47-6	o-Xylene	250	U	250	
135-98-8	sec-Butylbenzene	250	U	250	
994-05-8	tert-Amyl Methyl Ether	250	U	250	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly - Soil/146898  
Sample Matrix: Soil

Service Request: R1205125  
Date Collected: NA  
Date Received: NA  
Date Analyzed: 8/16/12 15:55

Sample Name: Method Blank  
Lab Code: RQ1209639-01

Units: µg/Kg  
Basis: Dry

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C  
Data File Name: J:\ACQUDATA\msvoa10\data\081612\E2598.D\

Analysis Lot: 305295  
Instrument Name: R-MS-10  
Dilution Factor: 50

CAS No.	Analyte Name	Result	Q	MRL	Note
98-06-6	tert-Butylbenzene	250	U	250	
156-60-5	trans-1,2-Dichloroethene	250	U	250	
10061-02-6	trans-1,3-Dichloropropene	250	U	250	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/16/12 15:55	
Dibromofluoromethane	97	70-130	8/16/12 15:55	
Toluene-d8	100	70-130	8/16/12 15:55	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** NA  
**Date Received:** NA  
**Date Extracted:** 8/9/12  
**Date Analyzed:** 8/10/12 13:25

**Sample Name:** Method Blank  
**Lab Code:** RQ1209159-01

**Units:** µg/Kg  
**Basis:** Dry

**Semivolatile Organic Compounds by GC/MS**

**Analytical Method:** 8270D  
**Prep Method:** EPA 3541  
**Data File Name:** J:\ACQUDATA\5973D\DATA\081012\AL224.D\

**Analysis Lot:** 304562  
**Extraction Lot:** 164317  
**Instrument Name:** R-MS-54  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
120-82-1	1,2,4-Trichlorobenzene	330	U	330	
95-50-1	1,2-Dichlorobenzene	330	U	330	
541-73-1	1,3-Dichlorobenzene	330	U	330	
106-46-7	1,4-Dichlorobenzene	330	U	330	
95-95-4	2,4,5-Trichlorophenol	330	U	330	
88-06-2	2,4,6-Trichlorophenol	330	U	330	
120-83-2	2,4-Dichlorophenol	330	U	330	
105-67-9	2,4-Dimethylphenol	330	U	330	
51-28-5	2,4-Dinitrophenol	1700	U	1700	
121-14-2	2,4-Dinitrotoluene	330	U	330	
606-20-2	2,6-Dinitrotoluene	330	U	330	
91-58-7	2-Chloronaphthalene	330	U	330	
95-57-8	2-Chlorophenol	330	U	330	
91-57-6	2-Methylnaphthalene	330	U	330	
95-48-7	2-Methylphenol	330	U	330	
88-74-4	2-Nitroaniline	1700	U	1700	
88-75-5	2-Nitrophenol	330	U	330	
91-94-1	3,3'-Dichlorobenzidine	330	U	330	
	3- and 4-Methylphenol Coelution	330	U	330	
99-09-2	3-Nitroaniline	1700	U	1700	
534-52-1	4,6-Dinitro-2-methylphenol	1700	U	1700	
101-55-3	4-Bromophenyl Phenyl Ether	330	U	330	
59-50-7	4-Chloro-3-methylphenol	330	U	330	
106-47-8	4-Chloroaniline	330	U	330	
7005-72-3	4-Chlorophenyl Phenyl Ether	330	U	330	
100-01-6	4-Nitroaniline	1700	U	1700	
100-02-7	4-Nitrophenol	1700	U	1700	
83-32-9	Acenaphthene	330	U	330	
208-96-8	Acenaphthylene	330	U	330	
120-12-7	Anthracene	330	U	330	
56-55-3	Benz(a)anthracene	330	U	330	
50-32-8	Benzo(a)pyrene	330	U	330	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** NA  
**Date Received:** NA  
**Date Extracted:** 8/9/12  
**Date Analyzed:** 8/10/12 13:25

**Sample Name:** Method Blank  
**Lab Code:** RQ1209159-01

**Units:** µg/Kg  
**Basis:** Dry

**Semivolatile Organic Compounds by GC/MS**

**Analytical Method:** 8270D  
**Prep Method:** EPA 3541  
**Data File Name:** J:\ACQUADATA\5973D\DATA\081012\AL224.D\

**Analysis Lot:** 304562  
**Extraction Lot:** 164317  
**Instrument Name:** R-MS-54  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
205-99-2	Benzo(b)fluoranthene	330	U	330	
191-24-2	Benzo(g,h,i)perylene	330	U	330	
207-08-9	Benzo(k)fluoranthene	330	U	330	
100-51-6	Benzyl Alcohol	330	U	330	
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U	330	
111-91-1	Bis(2-chloroethoxy)methane	330	U	330	
111-44-4	Bis(2-chloroethyl) Ether	330	U	330	
117-81-7	Bis(2-ethylhexyl) Phthalate	330	U	330	
85-68-7	Butyl Benzyl Phthalate	330	U	330	
86-74-8	Carbazole	330	U	330	
218-01-9	Chrysene	330	U	330	
84-74-2	Di-n-butyl Phthalate	330	U	330	
117-84-0	Di-n-octyl Phthalate	330	U	330	
53-70-3	Dibenz(a,h)anthracene	330	U	330	
132-64-9	Dibenzofuran	330	U	330	
84-66-2	Diethyl Phthalate	330	U	330	
131-11-3	Dimethyl Phthalate	330	U	330	
206-44-0	Fluoranthene	330	U	330	
86-73-7	Fluorene	330	U	330	
118-74-1	Hexachlorobenzene	330	U	330	
87-68-3	Hexachlorobutadiene	330	U	330	
77-47-4	Hexachlorocyclopentadiene	330	U	330	
67-72-1	Hexachloroethane	330	U	330	
193-39-5	Indeno(1,2,3-cd)pyrene	330	U	330	
78-59-1	Isophorone	330	U	330	
621-64-7	N-Nitrosodi-n-propylamine	330	U	330	
62-75-9	N-Nitrosodimethylamine	330	U	330	
86-30-6	N-Nitrosodiphenylamine	330	U	330	
91-20-3	Naphthalene	330	U	330	
98-95-3	Nitrobenzene	330	U	330	
87-86-5	Pentachlorophenol (PCP)	1700	U	1700	
85-01-8	Phenanthrene	330	U	330	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** NA  
**Date Received:** NA  
**Date Extracted:** 8/9/12  
**Date Analyzed:** 8/10/12 13:25

**Sample Name:** Method Blank  
**Lab Code:** RQ1209159-01

**Units:** µg/Kg  
**Basis:** Dry

**Semivolatile Organic Compounds by GC/MS**

**Analytical Method:** 8270D  
**Prep Method:** EPA 3541  
**Data File Name:** J:\ACQDATA\5973D\DATA\081012\AL224.D\

**Analysis Lot:** 304562  
**Extraction Lot:** 164317  
**Instrument Name:** R-MS-54  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
108-95-2	Phenol	330	U	330	
129-00-0	Pyrene	330	U	330	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	83	30-130	8/10/12 13:25	
2-Fluorobiphenyl	72	30-130	8/10/12 13:25	
2-Fluorophenol	67	30-130	8/10/12 13:25	
Nitrobenzene-d5	71	30-130	8/10/12 13:25	
Phenol-d6	71	30-130	8/10/12 13:25	
p-Terphenyl-d14	94	30-130	8/10/12 13:25	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Collected:** NA  
**Date Received:** NA  
**Date Extracted:** 8/13/12  
**Date Analyzed:** 8/14/12 20:24

**Sample Name:** Method Blank  
**Lab Code:** RQ1209282-01

**Units:** µg/Kg  
**Basis:** Dry

**Polychlorinated Biphenyls (PCBs) by GC**

**Analytical Method:** 8082A  
**Prep Method:** EPA 3541  
**Data File Name:** J:\ACQUDATA\6890G\DATA\081412\AS175.D\

**Analysis Lot:** 305036  
**Extraction Lot:** 164560  
**Instrument Name:** R-GC-58  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
12674-11-2	Aroclor 1016	33	U	33	
11104-28-2	Aroclor 1221	67	U	67	
11141-16-5	Aroclor 1232	33	U	33	
53469-21-9	Aroclor 1242	33	U	33	
12672-29-6	Aroclor 1248	33	U	33	
11097-69-1	Aroclor 1254	33	U	33	
11096-82-5	Aroclor 1260	33	U	33	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
Decachlorobiphenyl	69	30-150	8/14/12 20:24	
Tetrachloro-m-xylene	78	30-150	8/14/12 20:24	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Analyzed:** 8/17/12 -  
 8/22/12

**Lab Control Sample Summary  
 Inorganic Parameters**

**Units:** mg/L  
**Basis:** As Received

Analyte Name	Method	Lab Control Sample R1205125-LCS			% Rec	Limits
		Result	Spike Amount	% Rec		
Arsenic	6010C	4.62	5.0	92	80 - 120	
Barium	6010C	5.26	5.0	105	80 - 120	
Cadmium	6010C	0.973	1.00	97	80 - 120	
Chromium	6010C	5.13	5.00	103	80 - 120	
Lead	6010C	5.40	5.00	108	80 - 120	
Mercury	7470A	0.000932	0.00100	93	80 - 120	
Selenium	6010C	0.928	1.00	93	80 - 120	
Silver	6010C	5.20	5.00	104	80 - 120	

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Analyzed:** 8/22/12

**Lab Control Sample Summary  
 Inorganic Parameters**

**Units:** mg/Kg  
**Basis:** Dry

Analyte Name	Method	Lab Control Sample R1205125-LCS			% Rec	Limits
		Result	Spike Amount	% Rec		
Arsenic, Total	6010C	91.7	94.5	97	82.3 - 117	
Barium, Total	6010C	176	167	105	83.8 - 115	
Cadmium, Total	6010C	60.1	60.5	99	83.1 - 116	
Chromium, Total	6010C	72.9	70.4	104	81.8 - 118	
Lead, Total	6010C	91.1	91.8	99	82.2 - 117	
Mercury, Total	7471B	3.32	3.73	89	71.6 - 128	
Selenium, Total	6010C	80.6	86.4	93	80.1 - 120	
Silver, Total	6010C	36.1	34.4	105	66.3 - 134	

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Analyzed:** 8/13/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/Kg  
**Basis:** Dry

**Analysis Lot:** 304683

Analyte Name	Lab Control Sample RQ1209521-02			Duplicate Lab Control Sample RQ1209521-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	18.6	20.0	93	19.3	20.0	96	70 - 130	4	20
1,1,1-Trichloroethane (TCA)	19.0	20.0	95	20.0	20.0	100	70 - 130	5	20
1,1,2,2-Tetrachloroethane	21.3	20.0	107	22.5	20.0	112	70 - 130	5	20
1,1,2-Trichloroethane	20.3	20.0	101	21.2	20.0	106	70 - 130	5	20
1,1-Dichloroethane (1,1-DCA)	21.6	20.0	108	22.6	20.0	113	70 - 130	5	20
1,1-Dichloroethene (1,1-DCE)	21.1	20.0	106	21.3	20.0	107	70 - 130	<1	20
1,1-Dichloropropene	17.6	20.0	88	18.2	20.0	91	70 - 130	4	20
1,2,3-Trichlorobenzene	19.1	20.0	96	19.4	20.0	97	70 - 130	1	20
1,2,3-Trichloropropane	19.5	20.0	98	21.7	20.0	109	70 - 130	11	20
1,2,4-Trichlorobenzene	19.1	20.0	95	19.6	20.0	98	70 - 130	3	20
1,2,4-Trimethylbenzene	19.7	20.0	98	20.0	20.0	100	70 - 130	2	20
1,2-Dibromo-3-chloropropane (DBCP)	19.3	20.0	97	21.3	20.0	106	70 - 130	10	20
1,2-Dibromoethane	20.7	20.0	103	22.1	20.0	111	70 - 130	7	20
1,2-Dichlorobenzene	19.2	20.0	96	20.1	20.0	101	70 - 130	5	20
1,2-Dichloroethane	22.2	20.0	111	23.6	20.0	118	70 - 130	6	20
1,2-Dichloropropane	21.1	20.0	106	22.0	20.0	110	70 - 130	4	20
1,3,5-Trimethylbenzene	19.4	20.0	97	19.7	20.0	99	70 - 130	2	20
1,3-Dichlorobenzene	19.2	20.0	96	19.8	20.0	99	70 - 130	3	20
1,3-Dichloropropane	20.8	20.0	104	22.1	20.0	110	70 - 130	6	20
1,4-Dichlorobenzene	19.3	20.0	96	19.8	20.0	99	70 - 130	3	20
1,4-Dioxane	516	400	129	522	400	130	40 - 160	1	20
2,2-Dichloropropane	20.0	20.0	100	20.1	20.0	101	70 - 130	<1	20
2-Butanone (MEK)	21.4	20.0	107	24.3	20.0	122	40 - 160	13	20
2-Chlorotoluene	19.7	20.0	99	20.0	20.0	100	70 - 130	1	20
2-Hexanone	19.0	20.0	95	20.8	20.0	104	40 - 160	9	20
4-Chlorotoluene	20.2	20.0	101	20.9	20.0	104	70 - 130	3	20
p-Isopropyltoluene	19.5	20.0	97	19.6	20.0	98	70 - 130	<1	20
4-Methyl-2-pentanone	19.4	20.0	97	22.4	20.0	112	40 - 160	14	20
Acetone	24.1	20.0	120	25.7	20.0	129	40 - 160	7	20
Benzene	19.3	20.0	96	19.8	20.0	99	70 - 130	3	20
Bromobenzene	19.0	20.0	95	19.8	20.0	99	70 - 130	4	20
Bromochloromethane	20.9	20.0	105	22.4	20.0	112	70 - 130	7	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Analyzed:** 8/13/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/Kg  
**Basis:** Dry

**Analysis Lot:** 304683

Analyte Name	Lab Control Sample RQ1209521-02			Duplicate Lab Control Sample RQ1209521-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Bromodichloromethane	20.9	20.0	104	21.7	20.0	109	70 - 130	4	20
Bromoform	19.4	20.0	97	20.3	20.0	102	70 - 130	5	20
Bromomethane	29.2	20.0	146	29.0	20.0	145	40 - 160	<1	20
Carbon Disulfide	17.3	20.0	87	22.2	20.0	111	70 - 130	24 *	20
Carbon Tetrachloride	18.1	20.0	91	18.9	20.0	95	70 - 130	4	20
Chlorobenzene	19.0	20.0	95	19.8	20.0	99	70 - 130	4	20
Chloroethane	21.8	20.0	109	21.7	20.0	108	70 - 130	<1	20
Chloroform	21.2	20.0	106	22.0	20.0	110	70 - 130	4	20
Chloromethane	22.2	20.0	111	22.0	20.0	110	40 - 160	<1	20
Dibromochloromethane	20.7	20.0	103	21.9	20.0	109	70 - 130	6	20
Dibromomethane	20.9	20.0	105	22.2	20.0	111	70 - 130	6	20
Dichlorodifluoromethane (CFC 12)	17.3	20.0	86	18.2	20.0	91	40 - 160	6	20
Dichloromethane	20.4	20.0	102	21.5	20.0	107	70 - 130	5	20
Diethyl Ether	25.4	20.0	127	26.7	20.0	134 *	70 - 130	5	20
Diisopropyl Ether	22.9	20.0	114	23.5	20.0	118	70 - 130	3	20
Ethyl tert-Butyl Ether	21.6	20.0	108	22.6	20.0	113	70 - 130	4	20
Ethylbenzene	18.2	20.0	91	19.0	20.0	95	70 - 130	4	20
Hexachlorobutadiene	19.9	20.0	100	17.9	20.0	90	70 - 130	11	20
Isopropylbenzene (Cumene)	18.9	20.0	94	19.6	20.0	98	70 - 130	4	20
Methyl tert-Butyl Ether	22.8	20.0	114	24.7	20.0	123	70 - 130	8	20
Naphthalene	20.3	20.0	101	21.3	20.0	106	70 - 130	5	20
Styrene	19.6	20.0	98	20.1	20.0	100	70 - 130	3	20
Tetrachloroethene (PCE)	17.4	20.0	87	18.3	20.0	91	70 - 130	5	20
Tetrahydrofuran (THF)	22.7	20.0	113	24.9	20.0	124	70 - 130	9	20
Toluene	19.3	20.0	96	20.1	20.0	100	70 - 130	4	20
Trichloroethene (TCE)	18.4	20.0	92	19.0	20.0	95	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	21.4	20.0	107	21.7	20.0	108	70 - 130	1	20
Vinyl Chloride	20.9	20.0	104	21.1	20.0	105	70 - 130	1	20
cis-1,2-Dichloroethene	20.5	20.0	103	21.7	20.0	108	70 - 130	5	20
cis-1,3-Dichloropropene	19.5	20.0	97	20.8	20.0	104	70 - 130	7	20
m,p-Xylenes	38.1	40.0	95	39.5	40.0	99	70 - 130	4	20
n-Butylbenzene	20.4	20.0	102	20.2	20.0	101	70 - 130	1	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Analyzed:** 8/13/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/Kg  
**Basis:** Dry

**Analysis Lot:** 304683

Analyte Name	Lab Control Sample RQ1209521-02			Duplicate Lab Control Sample RQ1209521-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
n-Propylbenzene	19.6	20.0	98	19.7	20.0	99	70 - 130	<1	20
o-Xylene	19.0	20.0	95	19.9	20.0	100	70 - 130	5	20
sec-Butylbenzene	19.0	20.0	95	19.3	20.0	96	70 - 130	2	20
tert-Amyl Methyl Ether	20.4	20.0	102	21.9	20.0	110	70 - 130	7	20
tert-Butylbenzene	18.8	20.0	94	18.9	20.0	94	70 - 130	<1	20
trans-1,2-Dichloroethene	20.2	20.0	101	20.8	20.0	104	70 - 130	3	20
trans-1,3-Dichloropropene	20.1	20.0	100	21.4	20.0	107	70 - 130	6	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Analyzed:** 8/16/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/Kg  
**Basis:** Dry

**Analysis Lot:** 305295

Analyte Name	Lab Control Sample RQ1209639-02			Duplicate Lab Control Sample RQ1209639-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1,2-Tetrachloroethane	16.9	20.0	84	16.1	20.0	81	70 - 130	5	20
1,1,1-Trichloroethane (TCA)	15.4	20.0	77	14.9	20.0	74	70 - 130	3	20
1,1,2,2-Tetrachloroethane	19.2	20.0	96	18.3	20.0	91	70 - 130	5	20
1,1,2-Trichloroethane	18.5	20.0	93	17.3	20.0	87	70 - 130	7	20
1,1-Dichloroethane (1,1-DCA)	16.8	20.0	84	16.4	20.0	82	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	16.2	20.0	81	16.0	20.0	80	70 - 130	2	20
1,1-Dichloropropene	14.3	20.0	71	13.7	20.0	68 *	70 - 130	4	20
1,2,3-Trichlorobenzene	17.7	20.0	88	16.0	20.0	80	70 - 130	10	20
1,2,3-Trichloropropane	19.4	20.0	97	18.4	20.0	92	70 - 130	5	20
1,2,4-Trichlorobenzene	17.8	20.0	89	16.9	20.0	84	70 - 130	5	20
1,2,4-Trimethylbenzene	17.3	20.0	86	16.8	20.0	84	70 - 130	3	20
1,2-Dibromo-3-chloropropane (DBCP)	20.0	20.0	100	17.2	20.0	86	70 - 130	15	20
1,2-Dibromoethane	19.5	20.0	98	18.5	20.0	92	70 - 130	5	20
1,2-Dichlorobenzene	17.3	20.0	86	17.0	20.0	85	70 - 130	2	20
1,2-Dichloroethane	18.2	20.0	91	17.4	20.0	87	70 - 130	4	20
1,2-Dichloropropane	17.9	20.0	89	17.1	20.0	85	70 - 130	4	20
1,3,5-Trimethylbenzene	16.5	20.0	83	16.2	20.0	81	70 - 130	2	20
1,3-Dichlorobenzene	16.7	20.0	84	16.6	20.0	83	70 - 130	1	20
1,3-Dichloropropane	18.6	20.0	93	17.6	20.0	88	70 - 130	5	20
1,4-Dichlorobenzene	17.1	20.0	85	16.4	20.0	82	70 - 130	4	20
1,4-Dioxane	329	400	82	319	400	80	40 - 160	3	20
2,2-Dichloropropane	16.2	20.0	81	16.3	20.0	82	70 - 130	<1	20
2-Butanone (MEK)	20.1	20.0	101	18.3	20.0	92	40 - 160	9	20
2-Chlorotoluene	16.1	20.0	81	16.0	20.0	80	70 - 130	1	20
2-Hexanone	20.7	20.0	103	18.1	20.0	91	40 - 160	13	20
4-Chlorotoluene	16.7	20.0	84	16.5	20.0	83	70 - 130	1	20
p-Isopropyltoluene	16.7	20.0	84	16.5	20.0	82	70 - 130	1	20
4-Methyl-2-pentanone	22.0	20.0	110	19.7	20.0	98	40 - 160	11	20
Acetone	18.7	20.0	93	15.5	20.0	77	40 - 160	19	20
Benzene	15.8	20.0	79	15.6	20.0	78	70 - 130	1	20
Bromobenzene	17.5	20.0	87	16.9	20.0	84	70 - 130	3	20
Bromochloromethane	18.5	20.0	92	17.4	20.0	87	70 - 130	6	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Analyzed:** 8/16/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/Kg  
**Basis:** Dry

**Analysis Lot:** 305295

Analyte Name	Lab Control Sample RQ1209639-02			Duplicate Lab Control Sample RQ1209639-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Bromodichloromethane	17.7	20.0	88	16.9	20.0	84	70 - 130	5	20
Bromoform	20.7	20.0	103	18.3	20.0	91	70 - 130	13	20
Bromomethane	13.5	20.0	67	16.4	20.0	82	40 - 160	20	20
Carbon Disulfide	19.2	20.0	96	20.5	20.0	102	70 - 130	6	20
Carbon Tetrachloride	15.2	20.0	76	14.7	20.0	73	70 - 130	3	20
Chlorobenzene	17.1	20.0	85	16.0	20.0	80	70 - 130	6	20
Chloroethane	15.4	20.0	77	15.3	20.0	76	70 - 130	<1	20
Chloroform	16.8	20.0	84	16.4	20.0	82	70 - 130	2	20
Chloromethane	15.6	20.0	78	15.5	20.0	77	40 - 160	<1	20
Dibromochloromethane	19.4	20.0	97	17.8	20.0	89	70 - 130	9	20
Dibromomethane	18.6	20.0	93	17.8	20.0	89	70 - 130	4	20
Dichlorodifluoromethane (CFC 12)	12.2	20.0	61	12.3	20.0	61	40 - 160	<1	20
Dichloromethane	17.6	20.0	88	17.1	20.0	85	70 - 130	3	20
Diethyl Ether	20.4	20.0	102	19.4	20.0	97	70 - 130	5	20
Diisopropyl Ether	21.2	20.0	106	21.0	20.0	105	70 - 130	1	20
Ethyl tert-Butyl Ether	21.4	20.0	107	20.4	20.0	102	70 - 130	5	20
Ethylbenzene	16.2	20.0	81	15.5	20.0	78	70 - 130	4	20
Hexachlorobutadiene	15.0	20.0	75	15.0	20.0	75	70 - 130	<1	20
Isopropylbenzene (Cumene)	16.4	20.0	82	15.8	20.0	79	70 - 130	3	20
Methyl tert-Butyl Ether	20.0	20.0	100	18.8	20.0	94	70 - 130	6	20
Naphthalene	20.0	20.0	100	18.3	20.0	91	70 - 130	9	20
Styrene	17.8	20.0	89	16.9	20.0	84	70 - 130	6	20
Tetrachloroethene (PCE)	15.5	20.0	77	15.1	20.0	75	70 - 130	3	20
Tetrahydrofuran (THF)	19.1	20.0	95	17.6	20.0	88	70 - 130	8	20
Toluene	16.4	20.0	82	15.9	20.0	79	70 - 130	4	20
Trichloroethene (TCE)	16.0	20.0	80	15.5	20.0	78	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	15.2	20.0	76	15.3	20.0	76	70 - 130	<1	20
Vinyl Chloride	15.3	20.0	77	15.5	20.0	77	70 - 130	<1	20
cis-1,2-Dichloroethene	17.1	20.0	85	16.5	20.0	83	70 - 130	3	20
cis-1,3-Dichloropropene	17.1	20.0	86	16.6	20.0	83	70 - 130	3	20
m,p-Xylenes	33.7	40.0	84	31.8	40.0	80	70 - 130	6	20
n-Butylbenzene	16.8	20.0	84	16.7	20.0	84	70 - 130	<1	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Analyzed:** 8/16/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/Kg

**Basis:** Dry

**Analysis Lot:** 305295

Analyte Name	Lab Control Sample RQ1209639-02			Duplicate Lab Control Sample RQ1209639-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
n-Propylbenzene	16.3	20.0	82	16.2	20.0	81	70 - 130	<1	20
o-Xylene	17.2	20.0	86	16.2	20.0	81	70 - 130	6	20
sec-Butylbenzene	16.2	20.0	81	16.2	20.0	81	70 - 130	<1	20
tert-Amyl Methyl Ether	21.6	20.0	108	20.1	20.0	100	70 - 130	7	20
tert-Butylbenzene	16.1	20.0	80	16.1	20.0	80	70 - 130	<1	20
trans-1,2-Dichloroethene	16.1	20.0	80	15.5	20.0	77	70 - 130	4	20
trans-1,3-Dichloropropene	18.4	20.0	92	17.3	20.0	86	70 - 130	6	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Analyzed:** 8/10/12

**Lab Control Sample Summary**  
**Semivolatile Organic Compounds by GC/MS**

**Analytical Method:** 8270D  
**Prep Method:** EPA 3541

**Units:** µg/Kg  
**Basis:** Dry

**Extraction Lot:** 164317

Analyte Name	Lab Control Sample RQ1209159-02			Duplicate Lab Control Sample RQ1209159-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,2,4-Trichlorobenzene	2930	3330	88	2960	3330	89	40 - 140	<1	30
1,2-Dichlorobenzene	2700	3330	81	2740	3330	82	40 - 140	1	30
1,3-Dichlorobenzene	2600	3330	78	2640	3330	79	40 - 140	2	30
1,4-Dichlorobenzene	2630	3330	79	2670	3330	80	40 - 140	2	30
2,4,5-Trichlorophenol	3180	3330	95	3480	3330	104	30 - 130	9	30
2,4,6-Trichlorophenol	3320	3330	100	3550	3330	107	30 - 130	7	30
2,4-Dichlorophenol	3320	3330	100	3380	3330	101	30 - 130	2	30
2,4-Dimethylphenol	2770	3330	83	2820	3330	85	30 - 130	2	30
2,4-Dinitrophenol	1120	3330	34	1660	3330	50	15 - 140	39 *	30
2,4-Dinitrotoluene	3960	3330	119	4160	3330	125	40 - 140	5	30
2,6-Dinitrotoluene	3800	3330	114	3990	3330	120	40 - 140	5	30
2-Chloronaphthalene	2970	3330	89	3080	3330	92	40 - 140	4	30
2-Chlorophenol	2980	3330	89	3070	3330	92	30 - 130	3	30
2-Methylnaphthalene	3130	3330	94	3160	3330	95	40 - 140	<1	30
2-Methylphenol	2920	3330	88	3030	3330	91	30 - 130	4	30
2-Nitroaniline	3170	3330	95	3290	3330	99	40 - 140	4	30
2-Nitrophenol	3740	3330	112	3870	3330	116	30 - 130	3	30
3,3'-Dichlorobenzidine	3020	3330	91	3320	3330	100	40 - 140	10	30
3- and 4-Methylphenol Coelution	6120	6670	92	6350	6670	95	30 - 130	4	30
3-Nitroaniline	2970	3330	89	3070	3330	92	40 - 140	3	30
4,6-Dinitro-2-methylphenol	1890	3330	57	3040	3330	91	30 - 130	47 *	30
4-Bromophenyl Phenyl Ether	3360	3330	101	3540	3330	106	40 - 140	5	30
4-Chloro-3-methylphenol	3330	3330	100	3480	3330	105	30 - 130	4	30
4-Chloroaniline	2930	3330	88	3020	3330	90	15 - 140	3	30
4-Chlorophenyl Phenyl Ether	3280	3330	98	3410	3330	102	40 - 140	4	30
4-Nitroaniline	2960	3330	89	3160	3330	95	40 - 140	7	30
4-Nitrophenol	2180	3330	65	2680	3330	80	15 - 140	21	30
Acenaphthene	3250	3330	98	3380	3330	101	40 - 140	4	30
Acenaphthylene	3490	3330	105	3620	3330	109	40 - 140	4	30
Anthracene	3360	3330	101	3540	3330	106	40 - 140	5	30
Benz(a)anthracene	3250	3330	97	3440	3330	103	40 - 140	6	30
Benzo(a)pyrene	3150	3330	95	3320	3330	99	40 - 140	5	30

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Analyzed:** 8/10/12

**Lab Control Sample Summary  
 Semivolatile Organic Compounds by GC/MS**

**Analytical Method:** 8270D  
**Prep Method:** EPA 3541

**Units:** µg/Kg  
**Basis:** Dry

**Extraction Lot:** 164317

Analyte Name	Lab Control Sample RQ1209159-02			Duplicate Lab Control Sample RQ1209159-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Benzo(b)fluoranthene	3360	3330	101	3540	3330	106	40 - 140	5	30
Benzo(g,h,i)perylene	3400	3330	102	3580	3330	107	40 - 140	5	30
Benzo(k)fluoranthene	3360	3330	101	3500	3330	105	40 - 140	4	30
Benzyl Alcohol	3330	3330	100	3430	3330	103	40 - 140	3	30
2,2'-Oxybis(1-chloropropane)	3260	3330	98	3320	3330	99	40 - 140	2	30
Bis(2-chloroethoxy)methane	2950	3330	89	2980	3330	89	40 - 140	<1	30
Bis(2-chloroethyl) Ether	2840	3330	85	2840	3330	85	40 - 140	<1	30
Bis(2-ethylhexyl) Phthalate	3250	3330	97	3440	3330	103	40 - 140	6	30
Butyl Benzyl Phthalate	3120	3330	94	3290	3330	99	40 - 140	5	30
Carbazole	3080	3330	92	3260	3330	98	40 - 140	6	30
Chrysene	3260	3330	98	3460	3330	104	40 - 140	6	30
Di-n-butyl Phthalate	3260	3330	98	3440	3330	103	40 - 140	5	30
Di-n-octyl Phthalate	3320	3330	100	3540	3330	106	40 - 140	6	30
Dibenz(a,h)anthracene	3380	3330	101	3550	3330	106	40 - 140	5	30
Dibenzofuran	3100	3330	93	3240	3330	97	40 - 140	5	30
Diethyl Phthalate	3200	3330	96	3360	3330	101	40 - 140	5	30
Dimethyl Phthalate	3150	3330	95	3330	3330	100	40 - 140	5	30
Fluoranthene	3400	3330	102	3620	3330	109	40 - 140	6	30
Fluorene	3340	3330	100	3520	3330	106	40 - 140	5	30
Hexachlorobenzene	3340	3330	100	3580	3330	107	40 - 140	7	30
Hexachlorobutadiene	2990	3330	90	2970	3330	89	40 - 140	<1	30
Hexachlorocyclopentadiene	2710	3330	81	2830	3330	85	40 - 140	5	30
Hexachloroethane	2510	3330	75	2540	3330	76	40 - 140	1	30
Indeno(1,2,3-cd)pyrene	3280	3330	98	3450	3330	104	40 - 140	5	30
Isophorone	3120	3330	94	3190	3330	96	40 - 140	2	30
N-Nitrosodi-n-propylamine	2930	3330	88	3040	3330	91	40 - 140	4	30
N-Nitrosodimethylamine	2630	3330	79	2680	3330	81	40 - 140	2	30
N-Nitrosodiphenylamine	3440	3330	103	3630	3330	109	40 - 140	5	30
Naphthalene	3040	3330	91	3050	3330	92	40 - 140	<1	30
Nitrobenzene	2930	3330	88	2910	3330	87	40 - 140	<1	30
Pentachlorophenol (PCP)	2080	3330	62	2800	3330	84	30 - 130	30	30
Phenanthrene	3400	3330	102	3560	3330	107	40 - 140	5	30

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Analyzed:** 8/10/12

**Lab Control Sample Summary  
 Semivolatile Organic Compounds by GC/MS**

**Analytical Method:** 8270D  
**Prep Method:** EPA 3541

**Units:** µg/Kg  
**Basis:** Dry

**Extraction Lot:** 164317

Analyte Name	Lab Control Sample RQ1209159-02			Duplicate Lab Control Sample RQ1209159-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Phenol	2920	3330	88	3040	3330	91	15 - 140	4	30
Pyrene	3360	3330	101	3530	3330	106	40 - 140	5	30

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly - Soil/146898  
**Sample Matrix:** Soil

**Service Request:** R1205125  
**Date Analyzed:** 8/14/12

**Lab Control Sample Summary  
 Polychlorinated Biphenyls (PCBs) by GC**

**Analytical Method:** 8082A  
**Prep Method:** EPA 3541

**Units:** µg/Kg  
**Basis:** Dry

**Extraction Lot:** 164560

Analyte Name	Lab Control Sample RQ1209282-02			Duplicate Lab Control Sample RQ1209282-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Aroclor 1260	124	167	75	120	167	72	40 - 140	3	30

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

11151st Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) | 585.288.8475 (fax) | PAGE 1 OF 2

Project Name		Project Number			ANALYSIS REQUESTED (Include Method Number and Container Preservative)			
Project Manager	Report CC	PRESERVATIVE	METHOD	NUMBER OF CONTAINERS	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	REMARKS/ALTERNATE DESCRIPTION	
VARIAN	14689B		MECH 402					
RAYmond CADorette	RAYmond CADorette							
SHAW E+I	100 Tech Ctr Drive							
Stoughton MA 02072								
617 589-6102								
RAYmond CADorette@shawgrp.com								
DEVIN COTE								
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	DATE	SAMPLING TIME	MATRIX				
TRENCH 1 (Sandbag Room)		8/2/12	10:00	SOIL	3			
TRENCH 2 (Shipping)		8/2/12	12:00	SOIL	3			

SPECIAL INSTRUCTIONS/COMMENTS		TURNAROUND REQUIREMENTS		REPORT REQUIREMENTS		INVOICE INFORMATION	
Metals		RUSH (SURCHARGES APPLY)	I. Results Only		PO #:		
		1 day 2 day 3 day	II. Results + QC Summaries (LCS, DUP, MS/MSD as required)		BILL TO:		
		4 day 5 day	III. Results + QC and Calibration Summaries		SHAW E+I		
		<input checked="" type="checkbox"/> Standard	IV. Data Validation Report with Raw Data		100 Tech Ctr Dr		
		REQUESTED REPORT DATE			Stoughton MA		

See QAPP

STATE WHERE SAMPLES WERE COLLECTED: VARIAN MEDICAL BEVERLY MA

RECEIVED BY		RECEIVED BY	
Signature	Printed Name	Signature	Printed Name
<i>[Signature]</i>	Kevin Cote	<i>[Signature]</i>	Amy Hentschke
Printed Name	Kevin Cote	Printed Name	Amy Hentschke
Firm	SHAW	Firm	SHAW
Date/Time	8/7/12 12:00	Date/Time	8/8/12 0945

RELINQUISHED BY: [Signature] RECEIVED BY: [Signature]

RELINQUISHED BY: [Signature] RECEIVED BY: [Signature]

RELINQUISHED BY: [Signature] RECEIVED BY: [Signature]

RELINQUISHED BY: [Signature] RECEIVED BY: [Signature]

Project Name: VANIAN		Project Number: 146898		ANALYSIS REQUESTED (Include Method Number and Container Preservative)	
Project Manager: Raymond Cardone Tte		Report CC:		PRESERVATIVE: 40 40 40 40	
Company/Address: SHAW E+I 100 Tech Cir Stoughton MA 02072				+ METALS, TOTAL + METALS, DISSOLVED + METALS, TLRP (MADEP EPH)	
Phone #: 617-589-6102		E-mail:		REMARKS/ALTERNATE DESCRIPTION	
Sample Signature: [Signature]		Sampler's Printed Name: Kevin Cote			
CLIENT SAMPLE ID: Rolloff		FOR OFFICE USE ONLY LAB ID:			
		DATE: 8/12/13			
		TIME: 13:20			
		MATRIX: Soil			
		NUMBER OF CONTAINERS: 6			
SPECIAL INSTRUCTIONS/COMMENTS: Metals RCRA 8 METALS				TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day ___ 2 day ___ 3 day ___ 4 day ___ 5 day ___ ___ Standard	
STATE WHERE SAMPLES WERE COLLECTED: VANAN MEDICAL BEVERLY MA		RECEIVED BY: [Signature]		REPORT REQUIREMENTS I. Results Only ___ II. Results + QC Summaries (LCS, DUP, MSMSD as required) ___ III. Results + QC and Calibration Summaries ___ IV. Data Validation Report with Raw Data ___	
RELINQUISHED BY: [Signature]		RELINQUISHED BY: [Signature]		PO #: _____	
Signature: Kevin Cote		Signature: [Signature]		BILL TO: SHAW E+I 100 Tech Cir Stoughton MA	
Printed Name: Kevin Cote		Printed Name: [Signature]			
Firm: SHAW		Firm: [Signature]			
Date/Time: 8/12/13 12:00		Date/Time: 8/12/13 0945		Edata Yes ___ No ___	
RECEIVED BY: [Signature]		RECEIVED BY: [Signature]			
Signature: [Signature]		Signature: [Signature]			
Printed Name: [Signature]		Printed Name: [Signature]			
Firm: [Signature]		Firm: [Signature]			
Date/Time: [Signature]		Date/Time: [Signature]			

See QAPP   
Distribution: White - Lab Copy; Yellow - Return to Originator



# Cooler Receipt and Preservation Check Form

Project/Client Shaw Folder Number 312-5125

Cooler received on 8/8/12 by: AHJ COURIER: ALS  UPS FEDEX VELOCITY CLIENT

- Were custody seals on outside of cooler?  YES NO
- Were custody papers properly filled out (ink, signed, etc.)?  YES NO
- Did all bottles arrive in good condition (unbroken)?  YES NO
- Did VOA vials, Alkalinity, or Sulfide have significant\* air bubbles?  YES NO  N/A
- Were Ice or Ice packs present?  YES NO
- Where did the bottles originate?  ALS/ROC CLIENT
- Temperature of cooler(s) upon receipt: 2.6°

Is the temperature within 0° - 6° C?:  Yes Yes Yes Yes Yes  
 If No, Explain Below No No No No No

Date/Time Temperatures Taken: 8/8/12 1034

Thermometer ID:  IR GUN#3 / IR GUN#4 Reading From:  Temp Blank  Sample Bottle

If out of Temperature, note packing/ice condition & Client Approval to Run Samples:

All Samples held in storage location R-002 by AHJ on 8/8/12 at 1039  
 5035 samples placed in storage location ROOS by AHJ on 8/8/12 at 1036

PC Secondary Review: MM 8/8/12

Cooler Breakdown: Date: 8/8/12 Time: 1545 by: RP

- Were all bottle labels complete (i.e. analysis, preservation, etc.)?  YES NO
- Did all bottle labels and tags agree with custody papers?  YES NO
- Were correct containers used for the tests indicated?  YES NO
- Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated  N/A

Explain any discrepancies: \_\_\_\_\_

pH	Reagent			Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
		YES	NO						
≥12	NaOH								
≤2	HNO <sub>3</sub>								
≤2	H <sub>2</sub> SO <sub>4</sub>								
<4	NaHSO <sub>4</sub>								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-			*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet			
	Zn Aceta	-	-						
	HCl	*	*						

Yes = All samples OK  
 No = Samples were preserved at lab as listed  
 PM OK to Adjust: \_\_\_\_\_

Bottle lot numbers: \_\_\_\_\_

Other Comments: \_\_\_\_\_

PC Secondary Review: MM 8/27/12  
H:\SMODOCS\Cooler Receipt 5.doc

\*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

## Data Usability Worksheet

<b>Project Name :</b>	Varian Medical Systems, Inc	<b>Job Number :</b>	146898
<b>Prepared By:</b>	Jennifer Gailey	<b>Date :</b>	9/11/2012
<b>Analyte Group :</b>	Volatile Organics Total organic Carbon Methane, Ethane, Ethene	<b>Analytical Method :</b>	8260B TOC RSK 175
<b>Completed MADEP CAM Certification Form included:</b>	Yes	<b>Laboratory ID No. :</b>	R1205492
<b>Chain of Custody included in Data Package ?</b>	Yes	<b>Is it Complete ?</b>	Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
8/21/2012	VOC 8260B		14 days	8/29, 8/30, 8/31/2012
8/21/2012	RSK175		14 days	8/28, 8/29/2012
8/21/2012	TOC		14 days	9/5, 9/6/2012

**Sample temperature within QC limits:** Yes

### Surrogate Recovery

Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

### MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

### Laboratory Control Samples

Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: NA

**Equipment Field Blank ID :** EB-1 8/21/2012

**Trip Blank ID :** TB-1 8/14/2012

**Method Blank:** VOC 8260B 8/28, 8/29, 8/30, 9/4/2012

TOC 9/5, 9/6/2012

RSK 175 8/28, 8/29/2012

**Were any compounds identified in the method blank, field blank or trip blank above detection limits ?** No

**If so, list Sample ID/Compound/Concentration/Units:**

### Notes:

For VOC analysis -Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the methods. OB9-BR (100') BW-4 (12.3'), and OB9-DO (92') were subsequently reanalyzed at higher dilutions to bring target analytes within the calibration range method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

For RSK 175 analysis -Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the methods. OB9-BR (100') AP23-DO, BW-5 (9.4) and BW-9 (12') samples were re-analyzed at higher dilutions to bring target analytes within the calibration range of method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

**Reviewed By:** Pernilla Haley



September 10, 2012

Service Request No: R1205492

Mr. Ray Cadorette  
Shaw Environmental & Infrastructure, Inc.  
100 Technology Center  
Stoughton, MA 02072

**Laboratory Results for: Varian Beverly/146898-02000000**

Dear Mr. Cadorette:

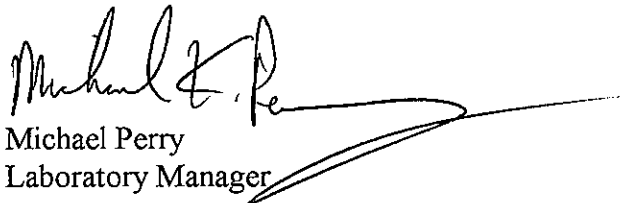
Enclosed are the results of the sample(s) submitted to our laboratory on August 22, 2012. For your reference, these analyses have been assigned our service request number **R1205492**.

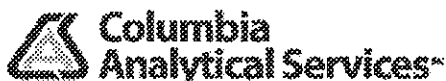
All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7469. You may also contact me via email at [Mike.Perry@alsglobal.com](mailto:Mike.Perry@alsglobal.com).

Respectfully submitted,

**Columbia Analytical Services, Inc. dba ALS Environmental**

  
Michael Perry  
Laboratory Manager



ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623

PHONE 585-288-5380 | FAX 585-288-8475

Columbia Analytical Services, Inc.

Part of the ALS Group A Campbell Brothers Limited Company



## MassDEP Analytical Protocol Certification Form

Laboratory Name: Columbia Analytical Services, Inc.

Project #: 1468987-02000000

Project Location: Varian Beverly

RTN:

**This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):**  
R1205492 – 001 - 018

Matrices:  Groundwater  Soil/Sediment  Drinking Water  Air  Other: \_\_\_\_\_

**CAM Protocol** (check all that apply below):

8260 VOC CAM II A <input checked="" type="checkbox"/>	7470/7471 Hg CAM III B <input type="checkbox"/>	MassDEP VPH CAM IV A <input type="checkbox"/>	8081 Pesticides CAM V B <input type="checkbox"/>	7196 Hex Cr CAM VI B <input type="checkbox"/>	MassDEP APH CAM IX A <input type="checkbox"/>
8270 SVOC CAM II B <input type="checkbox"/>	7010 Metals CAM III C <input type="checkbox"/>	MassDEP EPH CAM IV B <input type="checkbox"/>	8151 Herbicides CAM V C <input type="checkbox"/>	8330 Explosives CAM VIII A <input type="checkbox"/>	TO-15 VOC CAM IX B <input type="checkbox"/>
6010 Metals CAM III A <input type="checkbox"/>	6020 Metals CAM III D <input type="checkbox"/>	8082 PCB CAM V A <input type="checkbox"/>	9014 Total Cyanide/PAC CAM VI A <input type="checkbox"/>	6850 Perchlorate CAM VIII B <input type="checkbox"/>	Other: RSK, TOC

**Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status**

<b>A</b>	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes <input type="checkbox"/> No
<b>B</b>	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes <input type="checkbox"/> No
<b>C</b>	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes <input type="checkbox"/> No
<b>D</b>	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes <input type="checkbox"/> No
<b>E</b>	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
<b>F</b>	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes <input type="checkbox"/> No

**Responses to Questions G, H and I below are required for "Presumptive Certainty" status**

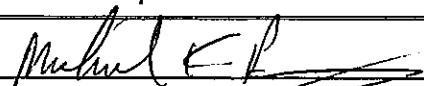
<b>G</b>	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes <input type="checkbox"/> No <sup>1</sup>
----------	-----------------------------------------------------------------------------------------------------------	------------------------------------------------

**Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

<b>H</b>	Were all QC performance standards specified in the CAM protocol(s) achieved?	X Yes <input type="checkbox"/> No <sup>1</sup>
<b>I</b>	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <sup>1</sup>

<sup>1</sup>All negative responses must be addressed in an attached laboratory narrative.

*I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.*

Signature: 

Position: Laboratory Manager

Printed Name: Michael K. Perry

Date: 9/10/12

## COLUMBIA ANALYTICAL SERVICES, INC.

**Client:** Shaw Environmental, Inc  
**Project:** Varian Beverly  
**Sample Matrix:** Water

**Service Request No.:** R1205492  
**Project Number:** 146898-02000000  
**Date Received:** 8/22/12

### CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II, deliverables with Massachusetts CAM analyses reporting. When appropriate to the method, method blank results have been reported with each analytical test.

#### Sample Receipt

Water samples were collected on 8/21/12 and received at CAS in good condition at a cooler temperature of 4.1 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and CAS Job #.

#### Volatile Organics

Eighteen water samples were analyzed for a site list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples OB9-BR (100') BW-4 (12.3'), and OB9-DO (92') were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial and continuing calibrations were compliant.

All Surrogate Standard recoveries were within QC limits.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

All samples were analyzed within the required holding time of 14 days.

No other analytical or QC problems were encountered with these analyses.

#### Modified RSK-175

Eleven water samples were analyzed for the hydrocarbon gases Methane, Ethane, and Ethene by modified RSK-175.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples OB9-BR (100'AP23-DO, BW-5 (9.4'), and BW-9 (12') were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All the initial and continuing calibration criteria were met for all analytes.

The Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were all within the QC limits.

The Method Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

**TOC Analyses**

Eleven water samples were analyzed for TOC by method SM20 5310C.

The initial and continuing calibration criteria were met for all analytes.

All Blank Spike (LCS) recoveries were within QC limits.

No analytical or QC problems were encountered.

## CASE NARRATIVE

This report contains analytical results for the following samples:  
Service Request Number: R1205492

<u>Lab ID</u>	<u>Client ID</u>
R1205492-001	TB-1
R1205492-002	EB-1
R1205492-003	STR-3
R1205492-004	MW-8 (16.8')
R1205492-005	UNNAMED STREAM
R1205492-006	OB15-S (18.6')
R1205492-007	OB10-S (29')
R1205492-008	OB12-S (27.7')
R1205492-009	MW-9 (19.7')
R1205492-010	OB9-BR (100')
R1205492-011	BW-4 (12.3')
R1205492-012	OB9-S (23')
R1205492-013	BW-5 (9.4')
R1205492-014	OB9-DO (92')
R1205492-015	BW-6 (13.3')
R1205492-016	BW-8 (14')
R1205492-017	BW-9 (12')
R1205492-018	BW-3 (15.5')

## REPORT QUALIFIERS

- U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
- J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
- \* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
- H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
- # Spike was diluted out.
- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Concentration >40% (25% for CLP) difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed ( $\geq 100\%$  Difference between two GC columns).
- X See Case Narrative for discussion.



**CAS/Rochester Lab ID # for Massachusetts Certification**  
M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

*The Commonwealth of Massachusetts*



*Department of Environmental Protection*

*Division of Environmental Analysis  
Senator William X. Wall Experiment Station*

*certifies*

M-NY032

COLUMBIA ANALYTICAL SERVICES  
1565 JEFFERSON RD  
BUILDING 300, SUITE 360  
ROCHESTER, NY 14623-0000

*Laboratory Director:* Michael K. Perry

*for the analysis of* NON POTABLE WATER (CHEMISTRY)

*pursuant to 310 CMR 42.00*

*This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.*

*This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.*

*Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.*

*Oscar C. Pincas*

*Director, Division of Environmental Analysis*

*Issued:* 01 JUL 2012

*Expires:* 30 JUN 2013

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2012

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)	Effective Date	01 JUL 2012	Expiration Date	30 JUN 2013
<u>Analytes</u>			<u>Methods</u>	
ALUMINUM			EPA 200.7	
ANTIMONY			EPA 200.7	
ANTIMONY			EPA 200.8	
ARSENIC			EPA 200.7	
ARSENIC			EPA 200.8	
BERYLLIUM			EPA 200.7	
BERYLLIUM			EPA 200.8	
CADMIUM			EPA 200.7	
CADMIUM			EPA 200.8	
CHROMIUM			EPA 200.7	
CHROMIUM			EPA 200.8	
COBALT			EPA 200.7	
COBALT			EPA 200.8	
COPPER			EPA 200.7	
COPPER			EPA 200.8	
IRON			EPA 200.7	
LEAD			EPA 200.7	
LEAD			EPA 200.8	
MANGANESE			EPA 200.7	
MANGANESE			EPA 200.8	
MERCURY			EPA 245.1	
MOLYBDENUM			EPA 200.7	
MOLYBDENUM			EPA 200.8	
NICKEL			EPA 200.7	
NICKEL			EPA 200.8	
SELENIUM			EPA 200.7	
SELENIUM			EPA 200.8	
SILVER			EPA 200.7	
SILVER			EPA 200.8	
THALLIUM			EPA 200.7	
THALLIUM			EPA 200.8	
VANADIUM			EPA 200.7	
VANADIUM			EPA 200.8	
ZINC			EPA 200.7	
ZINC			EPA 200.8	
SPECIFIC CONDUCTIVITY			EPA 120.1	
TOTAL DISSOLVED SOLIDS			SM 2540C	
HARDNESS (CACO3), TOTAL			SM 2340C	
CALCIUM			EPA 200.7	
MAGNESIUM			EPA 200.7	
SODIUM			EPA 200.7	
POTASSIUM			EPA 200.7	
ALKALINITY, TOTAL			SM 2320B	

June 29, 2012

\*= Provisional Certification

Page 1 of 2

COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2012

M-NY032 COLUMBIA ANALYTICAL SERVICES  
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY)	Effective Date	01 JUL 2012	Expiration Date	30 JUN 2013
<u>Analytes</u>			<u>Methods</u>	
CHLORIDE			SM 4500-CL-E	
CHLORIDE			EPA 300.0	
FLUORIDE			EPA 300.0	
SULFATE			EPA 300.0	
AMMONIA-N			EPA 350.1	
NITRATE-N			EPA 300.0	
NITRATE-N			EPA 353.2	
KJELDAHL-N			EPA 351.2	
ORTHOPHOSPHATE			EPA 365.1	
PHOSPHORUS, TOTAL			EPA 365.1	
CHEMICAL OXYGEN DEMAND			EPA 410.4	
BIOCHEMICAL OXYGEN DEMAND			SM 5210B	
TOTAL ORGANIC CARBON			SM 5310C	
CYANIDE, TOTAL			EPA 335.4	
NON-FILTERABLE RESIDUE			SM 2540D	
OIL AND GREASE			EPA 1664	
PHENOLICS, TOTAL			EPA 420.4	
VOLATILE HALOCARBONS			EPA 601	
VOLATILE HALOCARBONS			EPA 624	
VOLATILE AROMATICS			EPA 602	
VOLATILE AROMATICS			EPA 624	
SVOC-ACID EXTRACTABLES			EPA 625	
SVOC-BASE/NEUTRAL EXTRACTABLES			EPA 625	
POLYCHLORINATED BIPHENYLS (WATEF			EPA 608	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1445  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 17:11

**Sample Name:** TB-1  
**Lab Code:** R1205492-001

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082812\F9035.D\

**Analysis Lot:** 306941  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	106	70-130	8/28/12 17:11	
Dibromofluoromethane	100	70-130	8/28/12 17:11	
Toluene-d8	103	70-130	8/28/12 17:11	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0645  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 17:39

**Sample Name:** EB-1  
**Lab Code:** R1205492-002

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082812\F9036.D\

**Analysis Lot:** 306941  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	8/28/12 17:39	
Dibromofluoromethane	98	70-130	8/28/12 17:39	
Toluene-d8	100	70-130	8/28/12 17:39	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0800  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 18:07

**Sample Name:** STR-3  
**Lab Code:** R1205492-003

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082812\F9037.D\

**Analysis Lot:** 306941  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	107	70-130	8/28/12 18:07	
Dibromofluoromethane	99	70-130	8/28/12 18:07	
Toluene-d8	103	70-130	8/28/12 18:07	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0830  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/29/12 11:26

**Sample Name:** MW-8 (16.8')  
**Lab Code:** R1205492-004

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQDATA\MSVOA8\DATA\082912\F9055.D\

**Analysis Lot:** 307144  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	34		5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	240		5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	410		5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	8/29/12 11:26	
Dibromofluoromethane	99	70-130	8/29/12 11:26	
Toluene-d8	102	70-130	8/29/12 11:26	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water  
**Sample Name:** UNNAMED STREAM  
**Lab Code:** R1205492-005

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0930  
**Date Received:** 8/22/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Carbon, Total Organic (TOC)	SM20 5310 C	16.2		mg/L	1.0	1	NA	9/5/12 15:08	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0930  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/29/12 12:28

**Sample Name:** UNNAMED STREAM  
**Lab Code:** R1205492-005

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQU\DATA\MSVOA8\DATA\082912\F9057.D\

**Analysis Lot:** 307144  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	43		10	
79-01-6	Trichloroethene (TCE)	71		10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	110		10	
156-59-2	cis-1,2-Dichloroethene	560		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	8/29/12 12:28	
Dibromofluoromethane	99	70-130	8/29/12 12:28	
Toluene-d8	102	70-130	8/29/12 12:28	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0930  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 11:04

**Sample Name:** UNNAMED STREAM  
**Lab Code:** R1205492-005

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star008.run

**Analysis Lot:** 306886  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	14		2.5	
74-85-1	Ethene	55		2.5	
74-82-8	Methane	160		2.5	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water  
**Sample Name:** OB15-S (18.6')  
**Lab Code:** R1205492-006

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0740  
**Date Received:** 8/22/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Carbon, Total Organic (TOC)	SM20 5310 C	1750	mg/L	100	100	NA	9/5/12 15:28	..



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0740  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/29/12 12:56

**Sample Name:** OB15-S (18.6')  
**Lab Code:** R1205492-006

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082912\F9058.D\

**Analysis Lot:** 307144  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	14		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	20		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	7.8		2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	8.8		2.0	
156-59-2	cis-1,2-Dichloroethene	24		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	8/29/12 12:56	
Dibromofluoromethane	97	70-130	8/29/12 12:56	
Toluene-d8	99	70-130	8/29/12 12:56	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0740  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 11:14

**Sample Name:** OB15-S (18.6')  
**Lab Code:** R1205492-006

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star665.run

**Analysis Lot:** 306886  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 250

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	300	250	
74-85-1	Ethene	280	250	
74-82-8	Methane	21000	250	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1000  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 19:58

**Sample Name:** OB10-S (29')  
**Lab Code:** R1205492-007

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082812\F9041.D\

**Analysis Lot:** 306941  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	11		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	4.0		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	8/28/12 19:58	
Dibromofluoromethane	98	70-130	8/28/12 19:58	
Toluene-d8	102	70-130	8/28/12 19:58	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1030  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 20:26

**Sample Name:** OB12-S (27.7')  
**Lab Code:** R1205492-008

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082812\F9042.D\

**Analysis Lot:** 306941  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.2		4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.3		4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	190		4.0	
79-01-6	Trichloroethene (TCE)	130		4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	4.0	U	4.0	
156-59-2	cis-1,2-Dichloroethene	4.0	U	4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	8/28/12 20:26	
Dibromofluoromethane	97	70-130	8/28/12 20:26	
Toluene-d8	100	70-130	8/28/12 20:26	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water  
**Sample Name:** MW-9 (19.7')  
**Lab Code:** R1205492-009

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0830  
**Date Received:** 8/22/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Carbon, Total Organic (TOC)	SM20 5310 C	28000	mg/L	2000	2000	NA	9/5/12 16:29	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0830  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 20:53

**Sample Name:** MW-9 (19.7')  
**Lab Code:** R1205492-009

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082812\F9043.D\

**Analysis Lot:** 306941  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	3.0		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	6.1		2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.7		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	5.8		2.0	
156-59-2	cis-1,2-Dichloroethene	16		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	8/28/12 20:53	
Dibromofluoromethane	98	70-130	8/28/12 20:53	
Toluene-d8	101	70-130	8/28/12 20:53	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0830  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 11:38

**Sample Name:** MW-9 (19.7')  
**Lab Code:** R1205492-009

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star666.run

**Analysis Lot:** 306886  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 250

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	2500		250	
74-85-1	Ethene	1600		250	
74-82-8	Methane	16000		250	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water  
**Sample Name:** OB9-BR (100')  
**Lab Code:** R1205492-010

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0930  
**Date Received:** 8/22/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Carbon, Total Organic (TOC)	SM20 5310 C	12.3	mg/L	1.0	1	NA	9/6/12 13:12	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0930  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 21:21

**Sample Name:** OB9-BR (100')  
**Lab Code:** R1205492-010

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082812\F9044.D\

**Analysis Lot:** 306941  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	1600		40	
79-01-6	Trichloroethene (TCE)	2100		40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	41		40	
156-59-2	cis-1,2-Dichloroethene	7100	E	40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	8/28/12 21:21	
Dibromofluoromethane	100	70-130	8/28/12 21:21	
Toluene-d8	102	70-130	8/28/12 21:21	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0930  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/29/12 13:24

**Sample Name:** OB9-BR (100')  
**Lab Code:** R1205492-010  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082912\F9059.D\

**Analysis Lot:** 307144  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	1300	D	100	
79-01-6	Trichloroethene (TCE)	1900	D	100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	100	U	100	
156-59-2	cis-1,2-Dichloroethene	7700	D	100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	8/29/12 13:24	
Dibromofluoromethane	97	70-130	8/29/12 13:24	
Toluene-d8	101	70-130	8/29/12 13:24	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0930  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 11:49

**Sample Name:** OB9-BR (100')  
**Lab Code:** R1205492-010

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star667.run

**Analysis Lot:** 306886  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	20 U	20	
74-85-1	Ethene	66	20	
74-82-8	Methane	2500 E	20	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 0930  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 11:58

**Sample Name:** OB9-BR (100')  
**Lab Code:** R1205492-010  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star668.run

**Analysis Lot:** 306886  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	50 U	50	
74-85-1	Ethene	65 D	50	
74-82-8	Methane	2500 D	50	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water  
**Sample Name:** BW-4 (12.3')  
**Lab Code:** R1205492-011

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1100  
**Date Received:** 8/22/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Carbon, Total Organic (TOC)	SM20 5310 C	5.5	mg/L	1.0	1	NA	9/5/12 17:49	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1100  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/29/12 13:53

**Sample Name:** BW-4 (12.3')  
**Lab Code:** R1205492-011

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082912\F9060.D\

**Analysis Lot:** 307144  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	11		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	350	E	2.0	
156-59-2	cis-1,2-Dichloroethene	210	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	8/29/12 13:53	
Dibromofluoromethane	97	70-130	8/29/12 13:53	
Toluene-d8	99	70-130	8/29/12 13:53	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1100  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/31/12 00:43

**Sample Name:** BW-4 (12.3')  
**Lab Code:** R1205492-011  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\083012\T1123.D\

**Analysis Lot:** 307433  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	400	D	5.0	
156-59-2	cis-1,2-Dichloroethene	160	D	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	8/31/12 00:43	
Dibromofluoromethane	102	70-130	8/31/12 00:43	
Toluene-d8	98	70-130	8/31/12 00:43	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1100  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 13:01

**Sample Name:** BW-4 (12.3')  
**Lab Code:** R1205492-011

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star670.run

**Analysis Lot:** 306886  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	60		10	
74-85-1	Ethene	310		10	
74-82-8	Methane	960		10	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water  
**Sample Name:** OB9-S (23')  
**Lab Code:** R1205492-012

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1010  
**Date Received:** 8/22/12

**Basis:** NA

**General Chemistry Parameters**

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM20 5310 C	210		mg/L	10	10	NA	9/5/12 18:10	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1010  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/30/12 22:31

**Sample Name:** OB9-S (23')  
**Lab Code:** R1205492-012

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\083012\T1119.D\

**Analysis Lot:** 307433  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	14		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	5.9		2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	3.1		2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	4.8		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.7		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	8/30/12 22:31	
Dibromofluoromethane	102	70-130	8/30/12 22:31	
Toluene-d8	101	70-130	8/30/12 22:31	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1010  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 13:33

**Sample Name:** OB9-S (23')  
**Lab Code:** R1205492-012

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star673.run

**Analysis Lot:** 306886  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 200

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	200 U	200	
74-85-1	Ethene	200 U	200	
74-82-8	Methane	13000	200	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water  
**Sample Name:** BW-5 (9.4')  
**Lab Code:** R1205492-013

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1130  
**Date Received:** 8/22/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Carbon, Total Organic (TOC)	SM20 5310 C	800		mg/L	100	100	NA	9/6/12 13:32	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1130  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/29/12 14:49

**Sample Name:** BW-5 (9.4')  
**Lab Code:** R1205492-013

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082912\F9062.D\

**Analysis Lot:** 307144  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.2		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	14		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	19		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	7.8		2.0	
127-18-4	Tetrachloroethene (PCE)	2.7		2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	20		2.0	
156-59-2	cis-1,2-Dichloroethene	14		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	8/29/12 14:49	
Dibromofluoromethane	96	70-130	8/29/12 14:49	
Toluene-d8	97	70-130	8/29/12 14:49	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1130  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 13:46

**Sample Name:** BW-5 (9.4')  
**Lab Code:** R1205492-013

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star674.run

**Analysis Lot:** 306886  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	49	10	
74-85-1	Ethene	170	10	
74-82-8	Methane	3600 E	10	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1130  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 13:57

**Sample Name:** BW-5 (9.4')  
**Lab Code:** R1205492-013  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star675.run

**Analysis Lot:** 306886  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	50 U	50	
74-85-1	Ethene	170 D	50	
74-82-8	Methane	4800 D	50	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water  
**Sample Name:** OB9-DO (92')  
**Lab Code:** R1205492-014

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1050  
**Date Received:** 8/22/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Carbon, Total Organic (TOC)	SM20 5310 C	29.7	mg/L	4.0	4	NA	9/5/12 18:50	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1050  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/31/12 01:15

**Sample Name:** OB9-DO (92')  
**Lab Code:** R1205492-014

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\083012\T1124.D\

**Analysis Lot:** 307433  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	20	U	20	
79-01-6	Trichloroethene (TCE)	20	U	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	2100	E	20	
156-59-2	cis-1,2-Dichloroethene	1400		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	8/31/12 01:15	
Dibromofluoromethane	104	70-130	8/31/12 01:15	
Toluene-d8	101	70-130	8/31/12 01:15	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1050  
**Date Received:** 8/22/12  
**Date Analyzed:** 9/4/12 13:19

**Sample Name:** OB9-DO (92')  
**Lab Code:** R1205492-014  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\090412\F9085.D\

**Analysis Lot:** 307752  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	40	U	40	
79-01-6	Trichloroethene (TCE)	40	U	40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	1800	D	40	
156-59-2	cis-1,2-Dichloroethene	1700	D	40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	9/4/12 13:19	
Dibromofluoromethane	99	70-130	9/4/12 13:19	
Toluene-d8	97	70-130	9/4/12 13:19	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1050  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/28/12 14:10

**Sample Name:** OB9-DO (92')  
**Lab Code:** R1205492-014

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star676.run

**Analysis Lot:** 306886  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	20 U	20	
74-85-1	Ethene	20 U	20	
74-82-8	Methane	1800	20	

COLUMBIA ANALYTICAL SERVICES, INC.

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water  
**Sample Name:** BW-6 (13.3')  
**Lab Code:** R1205492-015

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1125  
**Date Received:** 8/22/12

**Basis:** NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM20 5310 C	271		mg/L	10	10	NA	9/5/12 19:10	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1125  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/30/12 23:04

**Sample Name:** BW-6 (13.3')  
**Lab Code:** R1205492-015

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\083012\T1120.D\

**Analysis Lot:** 307433  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	13		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	6.5		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	4.5		2.0	
156-59-2	cis-1,2-Dichloroethene	2.7		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	8/30/12 23:04	
Dibromofluoromethane	103	70-130	8/30/12 23:04	
Toluene-d8	100	70-130	8/30/12 23:04	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1125  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/29/12 15:41

**Sample Name:** BW-6 (13.3')  
**Lab Code:** R1205492-015

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star900.run

**Analysis Lot:** 307296  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	20		5.0	
74-85-1	Ethene	77		5.0	
74-82-8	Methane	350		5.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water  
**Sample Name:** BW-8 (14')  
**Lab Code:** R1205492-016

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1205  
**Date Received:** 8/22/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Carbon, Total Organic (TOC)	SM20 5310 C	194	mg/L	20	20	NA	9/6/12 13:52	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1205  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/30/12 23:37

**Sample Name:** BW-8 (14')  
**Lab Code:** R1205492-016

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\083012\T1121.D\

**Analysis Lot:** 307433  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	13		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	18		2.0	
67-66-3	Chloroform	5.4		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.4		2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	8/30/12 23:37	
Dibromofluoromethane	104	70-130	8/30/12 23:37	
Toluene-d8	100	70-130	8/30/12 23:37	



**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1205  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/29/12 10:53

**Sample Name:** BW-8 (14')  
**Lab Code:** R1205492-016

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star686.run

**Analysis Lot:** 307083  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 20

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	40		20	
74-85-1	Ethene	39		20	
74-82-8	Methane	1700		20	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water  
**Sample Name:** BW-9 (12')  
**Lab Code:** R1205492-017

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1230  
**Date Received:** 8/22/12

**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution Factor</b>	<b>Date Extracted</b>	<b>Date Analyzed</b>	<b>Note</b>
Carbon, Total Organic (TOC)	SM20 5310 C	1010	mg/L	200	200	NA	9/5/12 19:51	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1230  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/31/12 00:10

**Sample Name:** BW-9 (12')  
**Lab Code:** R1205492-017

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\083012\T1122.D\

**Analysis Lot:** 307433  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	13		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	110		2.0	
67-66-3	Chloroform	4.6		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	13		2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	8/31/12 00:10	
Dibromofluoromethane	104	70-130	8/31/12 00:10	
Toluene-d8	101	70-130	8/31/12 00:10	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1230  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/29/12 11:03

**Sample Name:** BW-9 (12')  
**Lab Code:** R1205492-017

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star687.run

**Analysis Lot:** 307083  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 50

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	450		50	
74-85-1	Ethene	370		50	
74-82-8	Methane	9300	E	50	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1230  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/29/12 11:25

**Sample Name:** BW-9 (12')  
**Lab Code:** R1205492-017  
**Run Type:** Dilution

**Units:** µg/L  
**Basis:** NA

Dissolved Gases by GC/FID

**Analytical Method:** RSK 175  
**Data File Name:** star688.run

**Analysis Lot:** 307083  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 100

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	450 D	100	
74-85-1	Ethene	370 D	100	
74-82-8	Methane	9400 D	100	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** 8/21/12 1125  
**Date Received:** 8/22/12  
**Date Analyzed:** 8/29/12 11:59

**Sample Name:** BW-3 (15.5')  
**Lab Code:** R1205492-018

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082912\F9056.D\

**Analysis Lot:** 307144  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	11		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.6		2.0	
67-66-3	Chloroform	8.7		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.2		2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	6.4		2.0	
156-59-2	cis-1,2-Dichloroethene	3.9		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/29/12 11:59	
Dibromofluoromethane	96	70-130	8/29/12 11:59	
Toluene-d8	98	70-130	8/29/12 11:59	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1205492-MB1

**Service Request:** R1205492  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

**General Chemistry Parameters**

<b>Analyte Name</b>	<b>Method</b>	<b>Result</b>	<b>Q</b>	<b>Units</b>	<b>MRL</b>	<b>Dilution</b>	<b>Date</b>	<b>Date</b>	<b>Note</b>
						<b>Factor</b>	<b>Extracted</b>	<b>Analyzed</b>	
Carbon, Total Organic (TOC)	SM20 5310 C	1.0	U	mg/L	1.0	1	NA	9/5/12 13:06	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1205492-MB2

**Service Request:** R1205492  
**Date Collected:** NA  
**Date Received:** NA  
  
**Basis:** NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM20 5310 C	1.0 U	mg/L	1.0	1	NA	9/6/12 11:51	



**COLUMBIA ANALYTICAL SERVICES, INC.**

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Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 8/28/12 12:56

**Sample Name:** Method Blank  
**Lab Code:** RQ1210032-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082812\F9026.D\

**Analysis Lot:** 306941  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	105	70-130	8/28/12 12:56	
Dibromofluoromethane	100	70-130	8/28/12 12:56	
Toluene-d8	103	70-130	8/28/12 12:56	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 8/29/12 10:31

**Sample Name:** Method Blank  
**Lab Code:** RQ1210112-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\082912\F9053.D\

**Analysis Lot:** 307144  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	8/29/12 10:31	
Dibromofluoromethane	98	70-130	8/29/12 10:31	
Toluene-d8	101	70-130	8/29/12 10:31	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 8/30/12 16:26

**Sample Name:** Method Blank  
**Lab Code:** RQ1210181-05

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\msvoa12\Data\083012\T1108.D\

**Analysis Lot:** 307433  
**Instrument Name:** R-MS-12  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	8/30/12 16:26	
Dibromofluoromethane	103	70-130	8/30/12 16:26	
Toluene-d8	100	70-130	8/30/12 16:26	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 9/4/12 12:34

**Sample Name:** Method Blank  
**Lab Code:** RQ1210262-03

**Units:** µg/L  
**Basis:** NA

**Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C  
**Data File Name:** J:\ACQUDATA\MSVOA8\DATA\090412\F9084.D\

**Analysis Lot:** 307752  
**Instrument Name:** R-MS-08  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	9/4/12 12:34	
Dibromofluoromethane	98	70-130	9/4/12 12:34	
Toluene-d8	96	70-130	9/4/12 12:34	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 8/28/12 09:44

**Sample Name:** Method Blank  
**Lab Code:** RQ1210012-01

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star004.run

**Analysis Lot:** 306886  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	
74-85-1	Ethene	1.0	U	1.0	
74-82-8	Methane	1.0	U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 8/29/12 09:56

**Sample Name:** Method Blank  
**Lab Code:** RQ1210126-01

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star683.run

**Analysis Lot:** 307083  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	
74-85-1	Ethene	1.0	U	1.0	
74-82-8	Methane	1.0	U	1.0	

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group  
Analytical Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Collected:** NA  
**Date Received:** NA  
**Date Analyzed:** 8/29/12 15:20

**Sample Name:** Method Blank  
**Lab Code:** RQ1210140-01

**Units:** µg/L  
**Basis:** NA

**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175  
**Data File Name:** star898.run

**Analysis Lot:** 307296  
**Instrument Name:** R-GC-02  
**Dilution Factor:** 1

CAS No.	Analyte Name	Result Q	MRL	Note
74-84-0	Ethane	1.0 U	1.0	
74-85-1	Ethene	1.0 U	1.0	
74-82-8	Methane	1.0 U	1.0	

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/146898-02000000  
Sample Matrix: Water

Service Request: R1205492  
Date Analyzed: 9/ 5/12

Lab Control Sample Summary  
General Chemistry Parameters

Units: mg/L  
Basis: NA

Analyte Name	Method	Lab Control Sample R1205492-LCS1			% Rec Limits
		Result	Spike Amount	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	9.96	10.0	100	86 - 117

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/146898-02000000  
Sample Matrix: Water

Service Request: R1205492  
Date Analyzed: 9/ 6/12

Lab Control Sample Summary  
General Chemistry Parameters

Units: mg/L  
Basis: NA

Analyte Name	Method	Lab Control Sample R1205492-LCS2			% Rec Limits
		Result	Spike Amount	% Rec	
Carbon, Total Organic (TOC)	SM20 5310 C	9.78	10.0	98	86 - 117

Results flagged with an asterisk (\*) indicate values outside control criteria.

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Analyzed:** 8/28/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 306941

Analyte Name	Lab Control Sample RQ1210032-04			Duplicate Lab Control Sample RQ1210032-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	27.5	25.0	110	27.5	25.0	110	70 - 130	<1	20
1,1,2,2-Tetrachloroethane	28.3	25.0	113	27.4	25.0	110	70 - 130	3	20
1,1,2-Trichloroethane	26.0	25.0	104	26.3	25.0	105	70 - 130	1	20
1,1-Dichloroethane (1,1-DCA)	30.9	25.0	123	30.6	25.0	122	70 - 130	<1	20
1,1-Dichloroethene (1,1-DCE)	27.9	25.0	111	27.9	25.0	112	70 - 130	<1	20
1,2-Dichloroethane	25.5	25.0	102	25.0	25.0	100	70 - 130	2	20
1,2-Dichloropropane	28.0	25.0	112	27.9	25.0	112	70 - 130	<1	20
Acetone	23.3	25.0	93	20.7	25.0	83	40 - 160	12	20
Bromodichloromethane	26.2	25.0	105	26.1	25.0	104	70 - 130	<1	20
Bromoform	26.8	25.0	107	25.8	25.0	103	70 - 130	4	20
Bromomethane	24.0	25.0	96	24.3	25.0	97	40 - 160	1	20
Carbon Tetrachloride	27.1	25.0	108	26.7	25.0	107	70 - 130	1	20
Chlorobenzene	27.3	25.0	109	27.3	25.0	109	70 - 130	<1	20
Chloroethane	26.8	25.0	107	26.5	25.0	106	70 - 130	1	20
Chloroform	27.9	25.0	111	28.3	25.0	113	70 - 130	2	20
Chloromethane	23.9	25.0	96	24.8	25.0	99	40 - 160	4	20
Dibromochloromethane	26.6	25.0	106	26.2	25.0	105	70 - 130	1	20
Methylene Chloride	28.5	25.0	114	28.1	25.0	112	70 - 130	1	20
Tetrachloroethene (PCE)	25.6	25.0	102	25.5	25.0	102	70 - 130	<1	20
Trichloroethene (TCE)	26.7	25.0	107	26.9	25.0	108	70 - 130	<1	20
Trichlorofluoromethane (CFC 11)	25.7	25.0	103	26.0	25.0	104	70 - 130	1	20
Vinyl Chloride	27.4	25.0	110	27.2	25.0	109	70 - 130	<1	20
cis-1,2-Dichloroethene	29.4	25.0	118	29.5	25.0	118	70 - 130	<1	20
cis-1,3-Dichloropropene	26.3	25.0	105	26.3	25.0	105	70 - 130	<1	20
trans-1,2-Dichloroethene	29.1	25.0	116	27.4	25.0	109	70 - 130	6	20
trans-1,3-Dichloropropene	24.9	25.0	100	25.0	25.0	100	70 - 130	<1	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Analyzed:** 8/29/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 307144

Analyte Name	Lab Control Sample RQ1210112-04			Duplicate Lab Control Sample RQ1210112-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	21.2	20.0	106	20.6	20.0	103	70 - 130	3	20
1,1,2,2-Tetrachloroethane	21.6	20.0	108	22.3	20.0	112	70 - 130	4	20
1,1,2-Trichloroethane	19.7	20.0	98	20.1	20.0	100	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	23.9	20.0	119	23.0	20.0	115	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	22.1	20.0	111	21.5	20.0	108	70 - 130	3	20
1,2-Dichloroethane	19.4	20.0	97	19.5	20.0	97	70 - 130	<1	20
1,2-Dichloropropane	21.9	20.0	110	21.2	20.0	106	70 - 130	3	20
Acetone	19.0	20.0	95	19.0	20.0	95	40 - 160	<1	20
Bromodichloromethane	19.7	20.0	99	19.4	20.0	97	70 - 130	2	20
Bromoform	18.7	20.0	93	18.8	20.0	94	70 - 130	<1	20
Bromomethane	19.9	20.0	100	19.2	20.0	96	40 - 160	4	20
Carbon Tetrachloride	20.6	20.0	103	20.2	20.0	101	70 - 130	2	20
Chlorobenzene	21.3	20.0	107	20.7	20.0	104	70 - 130	3	20
Chloroethane	20.7	20.0	103	19.9	20.0	99	70 - 130	4	20
Chloroform	22.4	20.0	112	21.5	20.0	107	70 - 130	4	20
Chloromethane	17.2	20.0	86	17.1	20.0	86	40 - 160	<1	20
Dibromochloromethane	19.3	20.0	97	19.6	20.0	98	70 - 130	2	20
Methylene Chloride	22.5	20.0	113	22.1	20.0	110	70 - 130	2	20
Tetrachloroethene (PCE)	19.3	20.0	96	18.9	20.0	94	70 - 130	2	20
Trichloroethene (TCE)	20.2	20.0	101	19.9	20.0	100	70 - 130	1	20
Trichlorofluoromethane (CFC 11)	20.5	20.0	102	19.4	20.0	97	70 - 130	5	20
Vinyl Chloride	21.4	20.0	107	20.6	20.0	103	70 - 130	4	20
cis-1,2-Dichloroethene	23.5	20.0	117	22.7	20.0	113	70 - 130	3	20
cis-1,3-Dichloropropene	20.8	20.0	104	19.9	20.0	100	70 - 130	4	20
trans-1,2-Dichloroethene	23.4	20.0	117	22.1	20.0	111	70 - 130	5	20
trans-1,3-Dichloropropene	18.5	20.0	92	18.8	20.0	94	70 - 130	2	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Analyzed:** 8/30/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 307433

Analyte Name	Lab Control Sample RQ1210181-03			Duplicate Lab Control Sample RQ1210181-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	20.1	20.0	100	20.6	20.0	103	70 - 130	3	20
1,1,2,2-Tetrachloroethane	19.7	20.0	98	19.6	20.0	98	70 - 130	<1	20
1,1,2-Trichloroethane	19.0	20.0	95	21.0	20.0	105	70 - 130	10	20
1,1-Dichloroethane (1,1-DCA)	19.9	20.0	100	20.2	20.0	101	70 - 130	1	20
1,1-Dichloroethene (1,1-DCE)	20.0	20.0	100	20.1	20.0	101	70 - 130	<1	20
1,2-Dichloroethane	21.0	20.0	105	22.0	20.0	110	70 - 130	5	20
1,2-Dichloropropane	19.6	20.0	98	19.8	20.0	99	70 - 130	<1	20
Acetone	19.5	20.0	98	21.1	20.0	106	40 - 160	8	20
Bromodichloromethane	21.1	20.0	105	21.6	20.0	108	70 - 130	2	20
Bromoform	20.7	20.0	103	21.1	20.0	105	70 - 130	2	20
Bromomethane	23.3	20.0	117	23.5	20.0	117	40 - 160	<1	20
Carbon Tetrachloride	21.2	20.0	106	21.1	20.0	106	70 - 130	<1	20
Chlorobenzene	20.3	20.0	101	20.9	20.0	105	70 - 130	3	20
Chloroethane	24.6	20.0	123	23.7	20.0	118	70 - 130	4	20
Chloroform	19.7	20.0	98	20.0	20.0	100	70 - 130	2	20
Chloromethane	23.2	20.0	116	23.2	20.0	116	40 - 160	<1	20
Dibromochloromethane	22.1	20.0	111	22.6	20.0	113	70 - 130	2	20
Methylene Chloride	19.5	20.0	97	19.1	20.0	96	70 - 130	2	20
Tetrachloroethene (PCE)	21.1	20.0	105	22.3	20.0	111	70 - 130	5	20
Trichloroethene (TCE)	19.7	20.0	99	19.7	20.0	98	70 - 130	<1	20
Trichlorofluoromethane (CFC 11)	22.2	20.0	111	23.2	20.0	116	70 - 130	4	20
Vinyl Chloride	24.9	20.0	124	25.0	20.0	125	70 - 130	<1	20
cis-1,2-Dichloroethene	19.2	20.0	96	20.1	20.0	101	70 - 130	5	20
cis-1,3-Dichloropropene	19.3	20.0	97	19.5	20.0	98	70 - 130	<1	20
trans-1,2-Dichloroethene	19.4	20.0	97	19.9	20.0	100	70 - 130	3	20
trans-1,3-Dichloropropene	19.2	20.0	96	19.8	20.0	99	70 - 130	3	20

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**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Analyzed:** 9/ 4/12

**Lab Control Sample Summary  
 Volatile Organic Compounds by GC/MS**

**Analytical Method:** 8260C

**Units:** µg/L  
**Basis:** NA

**Analysis Lot:** 307752

Analyte Name	Lab Control Sample RQ1210262-04			Duplicate Lab Control Sample RQ1210262-05			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	22.3	20.0	112	21.9	20.0	109	70 - 130	2	20
1,1,2,2-Tetrachloroethane	21.3	20.0	106	21.0	20.0	105	70 - 130	1	20
1,1,2-Trichloroethane	19.8	20.0	99	18.9	20.0	95	70 - 130	4	20
1,1-Dichloroethane (1,1-DCA)	25.0	20.0	125	24.7	20.0	124	70 - 130	1	20
1,1-Dichloroethene (1,1-DCE)	23.1	20.0	115	22.4	20.0	112	70 - 130	3	20
1,2-Dichloroethane	19.0	20.0	95	18.6	20.0	93	70 - 130	2	20
1,2-Dichloropropane	21.6	20.0	108	21.1	20.0	106	70 - 130	2	20
Acetone	17.9	20.0	89	20.0	20.0	100	40 - 160	11	20
Bromodichloromethane	19.8	20.0	99	19.2	20.0	96	70 - 130	3	20
Bromoform	18.8	20.0	94	18.2	20.0	91	70 - 130	3	20
Bromomethane	19.5	20.0	97	19.0	20.0	95	40 - 160	2	20
Carbon Tetrachloride	20.3	20.0	102	20.0	20.0	100	70 - 130	2	20
Chlorobenzene	20.4	20.0	102	19.7	20.0	98	70 - 130	4	20
Chloroethane	21.7	20.0	108	21.3	20.0	107	70 - 130	2	20
Chloroform	23.3	20.0	117	23.0	20.0	115	70 - 130	1	20
Chloromethane	19.4	20.0	97	19.1	20.0	96	40 - 160	1	20
Dibromochloromethane	19.8	20.0	99	18.9	20.0	94	70 - 130	5	20
Methylene Chloride	23.8	20.0	119	23.1	20.0	115	70 - 130	3	20
Tetrachloroethene (PCE)	18.9	20.0	94	18.2	20.0	91	70 - 130	4	20
Trichloroethene (TCE)	19.9	20.0	99	19.7	20.0	98	70 - 130	1	20
Trichlorofluoromethane (CFC 11)	20.9	20.0	104	20.5	20.0	102	70 - 130	2	20
Vinyl Chloride	22.4	20.0	112	21.8	20.0	109	70 - 130	3	20
cis-1,2-Dichloroethene	24.6	20.0	123	23.9	20.0	120	70 - 130	3	20
cis-1,3-Dichloropropene	20.2	20.0	101	19.6	20.0	98	70 - 130	3	20
trans-1,2-Dichloroethene	24.3	20.0	121	23.2	20.0	116	70 - 130	4	20
trans-1,3-Dichloropropene	18.6	20.0	93	17.8	20.0	89	70 - 130	5	20

Results flagged with an asterisk (\*) indicate values outside control criteria.

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COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/146898-02000000  
Sample Matrix: Water

Service Request: R1205492  
Date Analyzed: 8/28/12

Lab Control Sample Summary  
Dissolved Gases by GC/FID

Analytical Method: RSK 175

Units: µg/L

Basis: NA

Analysis Lot: 306886

Analyte Name	Lab Control Sample RQ1210012-02			Duplicate Lab Control Sample RQ1210012-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Ethane	28.9	26.0	111	27.4	26.0	105	56 - 148	5	20
Ethene	25.3	24.3	104	24.2	24.3	99	58 - 155	4	20
Methane	29.5	26.2	113	28.2	26.2	107	55 - 150	5	20

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

**COLUMBIA ANALYTICAL SERVICES, INC.**

Now part of the ALS Group

QA/QC Report

**Client:** Shaw Environmental & Infrastructure, Inc.  
**Project:** Varian Beverly/146898-02000000  
**Sample Matrix:** Water

**Service Request:** R1205492  
**Date Analyzed:** 8/29/12

**Lab Control Sample Summary**  
**Dissolved Gases by GC/FID**

**Analytical Method:** RSK 175

**Units:** µg/L

**Basis:** NA

**Analysis Lot:** 307083

**Lab Control Sample**  
RQ1210126-02

<b>Analyte Name</b>	<b>Result</b>	<b>Spike Amount</b>	<b>% Rec</b>	<b>% Rec Limits</b>
Ethane	28.5	26.0	109	56 - 148
Ethene	25.9	24.3	106	58 - 155
Methane	29.1	26.2	111	55 - 150

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

Now part of the ALS Group

QA/QC Report

Client: Shaw Environmental & Infrastructure, Inc.  
Project: Varian Beverly/146898-02000000  
Sample Matrix: Water

Service Request: R1205492  
Date Analyzed: 8/29/12

Lab Control Sample Summary  
Dissolved Gases by GC/FID

Analytical Method: RSK 175

Units: µg/L

Basis: NA

Analysis Lot: 307296

Lab Control Sample  
RQ1210140-02

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
Ethane	27.4	26.0	105	56 - 148
Ethene	25.3	24.3	104	58 - 155
Methane	28.0	26.2	107	55 - 150

Results flagged with an asterisk (\*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.



**CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM**

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 2

<b>Project Name</b> Varian Beverly Project Number: 146898-02000000 Varian Beverly		<b>ANALYSIS REQUESTED (Include Method Number and Container Preservative)</b> Report CC: Catherine.Mainville@Shawgrp.com Company/Address: Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072		<b>PRESERVATIVE</b> 1 3		<b>REMARKS/ALTERNATE DESCRIPTION</b> Total Organic Carbon Ethene Methane, Ethane, METALS DISSOLVED (List in comments below) METALS TOTAL (List in comments below) PCBs <input type="checkbox"/> 608 <input type="checkbox"/> 8082 <input type="checkbox"/> 608 PESTICIDES <input type="checkbox"/> 8081 <input type="checkbox"/> 608 <input type="checkbox"/> 8021 <input type="checkbox"/> 601/602 GC VOAS <input type="checkbox"/> 8260 <input type="checkbox"/> 624 <input type="checkbox"/> CLP (List) <input type="checkbox"/> 8270 <input type="checkbox"/> 625 GCMS SVOAS		<b>Preservative Key</b> 0. NONE 1. HCL 2. HNO3 3. H2SO4 4. NaOH 5. Zn Acetate 6. MeOH 7. NaHSO4 8. Other	
<b>FOR OFFICE USE ONLY</b> Client Sample ID: TB3-1 Sampling Date: 8/14/12 1445 Matrix: GW		Number of Containers: 3		Turnaround Requirements: RUSH (SURCHARGES APPLY) 1 day 2 day 3 day 4 day 5 day <input checked="" type="checkbox"/> Standard		Report Requirements: I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data		Invoice Information: PO #: 798802 Bill To: Shaw Environmental	
Special Instructions/Comments: Metals Site specific VOC list. Massachusetts CAM analyses reporting and QA/QC. Email GISKEY formatted EDD and PDF of report. TB3-1 PROVIDED BY LAB		Requested Report Date:		Relinquished By:		Relinquished By:		Relinquished By:	
State Where Samples Were Collected:		Received By:		Received By:		Received By:		Received By:	
Signature: [Signature] Printed Name: [Name] Firm: [Firm]		Signature: [Signature] Printed Name: [Name] Firm: [Firm]		Signature: [Signature] Printed Name: [Name] Firm: [Firm]		Signature: [Signature] Printed Name: [Name] Firm: [Firm]		Signature: [Signature] Printed Name: [Name] Firm: [Firm]	
Date/Time: 8/21/12 1330		Date/Time: 8/22/12 0845		Date/Time:		Date/Time:		Date/Time:	

<b>Project Name</b> Varian Beverly Project Manager Raymond Cadorette Company/Address Shaw Environmental, Inc. 100 Technology Center Drive Stoughton, MA 02072 Phone # 617-589-6102 E-mail Raymond.Cadorette@Shawgrp.com		<b>ANALYSIS REQUESTED (Include Method Number and Container Preservative)</b> PRESERVATIVE: 1 METALS, TOTAL (List in comments below) METALS, DISSOLVED (List in comments below) METANE, ETHANE Total Organic Carbon 1 3	
<b>FOR OFFICE USE ONLY</b> CLIENT SAMPLE ID BW-4 (12.3) OR-9-5 (2.3) BW-5 (9.4) OB-9-D0 (9.2) BW-6 (13.3) BW-8 (14.0) BW-9 (12.1)		REPORT REQUIREMENTS I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data PO #: 798802 BILL TO: Shaw Environmental	
SPECIAL INSTRUCTIONS/COMMENTS <b>Metals</b> Site specific VOC list. Massachusetts CAM analyses reporting and QA/QC. Email GISKey formatted EDD and PDF of report.		RECEIVED BY Signature: [Signature] Printed Name: [Name] Firm: [Firm]	
STATE WHERE SAMPLES WERE COLLECTED: MA		RECEIVED BY Signature: [Signature] Printed Name: [Name] Firm: [Firm]	
DATE/TIME 8/21/12 1330		DATE/TIME 8/21/12 1330	



# Cooler Receipt and Preservation Check Form

Project/Client Shaw Folder Number R17-549Z

Cooler received on 8/22/12 by: SP COURIER: ALS UPS FEDEX VELOCITY CLIENT

- Were custody seals on outside of cooler? YES NO
- Were custody papers properly filled out (ink, signed, etc.)? YES NO
- Did all bottles arrive in good condition (unbroken)? YES NO
- Did VOA vias, Alkalinity, or Sulfide have significant\* air bubbles? YES NO N/A
- Were Ice or Ice packs present? YES NO
- Where did the bottles originate? ALS/ROC CLIENT
- Temperature of cooler(s) upon receipt: 41°

Is the temperature within 0° - 6° C?: Yes Yes Yes Yes Yes

If No, Explain Below No No No No No

Date/Time Temperatures Taken: 8/22/12 0908

Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition & Client Approval to Run Samples:

All Samples held in storage location Room by SP on 8/22/12 at 0910  
5035 samples placed in storage location \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_

PC Secondary Review: MM 8/22/12

Cooler Breakdown: Date: 8/22/12 Time: 1125 by: SP

- Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- Did all bottle labels and tags agree with custody papers? YES NO
- Were correct containers used for the tests indicated? YES NO
- Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies: \_\_\_\_\_

pH	Reagent	YES NO		Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
		YES	NO						
≥12	NaOH								
≤2	HNO <sub>3</sub>								
≤2	H <sub>2</sub> SO <sub>4</sub>			WC112071A	7/12				
<4	NaHSO <sub>4</sub>								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	-	-						
	Zn Aceta	-	-						
	HCl	*	*	4111010	9/12				

Yes = All samples OK  
No = Samples were preserved at lab as listed  
PM OK to Adjust: \_\_\_\_\_

\*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem. on a separate worksheet

Bottle lot numbers: 2-143-001, 2-143-002

Other Comments: \_\_\_\_\_

PC Secondary Review: MM 9/10/12  
H:\SMODOCS\Cooler Receipt 5.doc

\*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

**APPENDIX C**

**GROUNDWATER GAUGING RESULTS, PHYSICAL PARAMETER DATA**

## GROUNDWATER PHYSICAL PARAMETER DATA

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

Site ID	Date	Color	ORP (mV)	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)
AP-12-BR	07/05/12	Light Purple	--	--	--	--
AP-12-BR	07/30/12	Dark Purple	--	--	--	--
AP-12-BR	08/20/12	Dark Purple	--	--	--	--
AP-12-DO	07/05/12	Light Purple	--	--	--	--
AP-12-DO	07/30/12	Dark Purple	--	--	--	--
AP-12-DO	08/20/12	Dark Purple	--	--	--	--
AP-26-DO	07/05/12	Clear	124.8	7.38	0.321	5.72
AP-26-DO	07/30/12	Dark Purple	--	--	--	--
AP-26-DO	08/20/12	Dark Purple	--	--	--	--
AP-27-DO	07/05/12	Clear	32.5	8.44	0.197	1.26
AP-27-DO	07/30/12	Clear	-104.2	8.65	0.934	0.60
AP-27-DO	08/20/12	Clear	103.8	8.68	0.971	0.60
BW-01	07/10/12	Clear	61.6	6.40	0.451	0.73
BW-01	07/11/12	White	-27.4	6.22	0.742	0.99
BW-01	07/12/12	White	-55.0	6.14	0.921	0.77
BW-01	07/16/12	White	-44.9	6.18	0.880	0.66
BW-01	07/18/12	White	-95.8	6.23	1.071	0.81
BW-01	07/19/12	Light White	-44.4	6.35	0.604	1.42
BW-01	07/20/12	Light White	-49.5	6.30	0.499	0.53
BW-01	08/20/12	Clear	-49.2	5.35	0.535	0.43
BW-02	07/10/12	Clear	25.5	6.05	0.404	0.48
BW-02	07/11/12	White	-59.3	6.23	1.098	0.56
BW-02	07/12/12	White	-41.0	6.12	1.341	0.75
BW-02	07/16/12	Clear	-15.1	6.21	0.466	1.15
BW-02	07/16/12	White	-25.9	5.99	1.452	0.40
BW-02	07/18/12	White	-5.1	5.94	0.662	0.41
BW-02	07/19/12	Clear	-15.1	6.21	0.466	1.15
BW-02	07/20/12	Clear	-17.9	6.23	0.502	0.35
BW-02	08/20/12	Clear	-85.5	5.86	0.259	0.64
BW-03	07/10/12	Clear	6.2	6.41	0.358	1.49
BW-03	07/11/12	Clear	-31.4	6.26	0.394	0.45
BW-03	07/12/12	Clear	-42.8	6.32	0.404	0.75
BW-03	07/16/12	White	-86.3	6.45	0.532	0.58
BW-03	07/18/12	White	-83.6	6.30	0.720	0.56
BW-03	07/19/12	White	-47.0	6.35	0.615	0.87
BW-03	07/20/12	White	-46.1	6.03	6.37	0.37
BW-03	08/20/12	Clear	-89.4	6.21	0.228	0.40
BW-04	07/10/12	Clear	-80.3	6.81	0.469	0.66
BW-04	07/11/12	Clear	-99.8	6.78	0.467	0.83
BW-04	07/12/12	Clear	-103.6	6.83	0.463	0.64
BW-04	07/16/12	Clear	-122.5	6.93	0.460	0.81
BW-04	07/18/12	Clear	-123.7	6.84	0.462	0.47

NOTES: -- = Not Analyzed  
mV=millivolts

ORP= Oxidation reduction potential  
S/m= Siemens per meter

Deg.C= Degrees Celcius

## GROUNDWATER PHYSICAL PARAMETER DATA

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

Site ID	Date	Color	ORP (mV)	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)
BW-04	07/19/12	Clear	-77.0	6.70	0.592	0.66
BW-04	07/20/12	Light White	-63.6	6.66	0.444	0.40
BW-05	07/10/12	Clear	-100.5	7.05	0.450	1.00
BW-05	07/11/12	Light White	-120.6	6.65	1.634	0.42
BW-05	07/12/12	White	-103.9	6.36	1.886	0.70
BW-05	07/16/12	White	-25.2	5.77	1.891	0.70
BW-05	07/18/12		-9.4	5.92	0.502	0.72
BW-05	07/19/12	Clear	-14.9	5.94	0.486	0.59
BW-05	07/20/12	Light White	5.1	6.20	0.351	0.36
BW-06	07/10/12	Clear	-87.2	7.04	0.654	1.09
BW-06	07/11/12	Clear	-124.4	7.08	0.660	0.39
BW-06	07/12/12	Clear	-126.0	6.96	0.662	0.48
BW-06	07/16/12	Clear	-112.6	6.97	0.671	0.28
BW-06	07/18/12	Clear	-103.6	6.93	0.674	0.39
BW-06	07/19/12	White	-9.2	6.08	1.237	0.60
BW-06	07/20/12	White	-25.3	5.98	1.534	0.65
BW-08	07/10/12	Clear	-116.0	7.17	0.559	0.81
BW-08	07/11/12	White	-122.5	6.72	1.680	0.41
BW-08	07/12/12	White	-74.5	6.40	1.873	0.80
BW-08	07/16/12	White	-8.1	5.64	2.028	0.70
BW-08	07/18/12	Light White	-51.0	6.49	0.491	0.37
BW-08	07/19/12	Light White	-35.6	6.46	0.415	0.60
BW-08	07/20/12	Clear	-31.7	6.46	0.409	0.39
BW-09	07/10/12	Clear	-121.1	7.40	0.640	0.42
BW-09	07/11/12	White	-112.5	6.74	1.573	0.59
BW-09	07/12/12	White	-73.1	6.42	1.767	0.75
BW-09	07/16/12	White	-26.2	5.74	2.124	0.66
BW-09	07/18/12	Light White	-34.6	6.16	0.514	1.10
BW-09	07/19/12	Clear	-17.7	6.04	0.514	0.52
BW-09	07/20/12	Clear	-218	6.21	0.443	0.27
BW-10	07/10/12	Clear	-91.6	7.21	0.714	0.17
BW-10	07/11/12	Clear	-124.9	7.10	0.725	0.93
BW-10	07/12/12	Clear	-115.8	7.13	0.730	0.16
BW-10	07/16/12	Light White	-96.2	6.91	0.728	0.39
BW-10	07/18/12	Clear	-105.9	6.92	0.746	1.41
BW-10	07/19/12	Clear	-61.5	6.60	0.746	0.70
BW-10	07/20/12	Clear	-47.2	6.51	0.773	0.27
BW-10	08/20/12	Clear	-127.4	6.61	1.160	0.38
CL02-BR	07/05/12	Clear	107.1	9.37	0.622	1.65
CL02-BR	07/30/12	Clear	-126.7	9.57	0.465	0.81
CL02-DO	07/05/12	Clear	213.6	7.34	0.799	4.91
CL02-DO	07/30/12	Clear	142.5	6.37	0.593	3.54
CL03-BR	07/05/12	Clear	109.4	9.90	0.339	1.83

NOTES: -- = Not Analyzed  
mV=millivolts

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Deg.C= Degrees Celcius

## GROUNDWATER PHYSICAL PARAMETER DATA

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

Site ID	Date	Color	ORP (mV)	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)
CL03-BR	07/30/12	Clear	3.4	10.12	0.260	0.69
CL03-BR	08/20/12	Clear	-0.9	10.23	0.265	0.63
MW-002R	07/05/12	Clear	293.1	6.35	0.951	1.56
MW-002R	07/30/12	Clear	211.5	5.60	1.746	0.66
MW-008	07/10/12	Clear	-111.4	6.93	0.518	1.05
MW-008	07/11/12	Clear	-124.0	6.89	0.534	0.47
MW-008	07/12/12	Clear	-134.9	6.93	0.532	0.09
MW-008	07/16/12	Clear	-114.5	6.82	0.566	0.60
MW-008	07/18/12	Clear	-107.7	6.68	0.578	0.75
MW-008	07/19/12	Clear	-68.8	6.63	0.588	1.47
MW-008	07/20/12	Clear	-25.8	6.36	0.221	0.35
MW-009	07/10/12	Clear	-115.5	6.98	2.481	1.04
MW-009	07/11/12	Clear	-121.0	6.87	2.779	0.46
MW-009	07/12/12	Clear	-128.8	6.89	2.514	0.62
MW-009	07/16/12	Clear	-109.5	6.79	2.754	0.45
MW-009	07/18/12	Clear	-94.5	6.81	2.622	0.86
MW-009	07/19/12	White	-52.2	6.64	2.009	2.92
MW-009	07/20/12	White	-53.1	6.55	0.597	0.68
OB-09-DO	07/10/12	Clear	-39.5	6.47	0.209	0.11
OB-09-DO	07/12/12	Light White	-29.7	6.06	0.157	0.26
OB-09-DO	07/16/12	Light White	-38.0	6.24	0.230	0.15
OB-09-DO	07/18/12	Clear	-16.6	6.03	0.161	0.23
OB-09-DO	07/19/12	Light White	-33.2	6.39	0.220	0.19
OB-09-DO	07/20/12	Clear	-38.3	5.70	1.260	0.30
OB-09-S	07/10/12	Clear	-94.2	6.95	2.185	0.42
OB-09-S	07/11/12	White	-88.3	6.80	1.918	0.58
OB-09-S	07/12/12	White	-102.4	6.71	1.841	0.42
OB-09-S	07/16/12	White	-28.3	6.10	1.702	0.54
OB-09-S	07/18/12	White	-1.8	5.97	1.762	0.48
OB-09-S	07/19/12	White	-0.1	6.29	0.189	0.33
OB-09-S	07/20/12	White	-6.7	5.98	1.204	0.59
OB-10-DO	07/05/12	Clear	28.3	8.41	0.569	1.01
OB-10-DO	07/30/12	Clear	-81.9	7.69	0.468	0.56
OB-10-DO	08/20/12	Clear	-136.7	7.96	0.474	0.29
OB-12-BR	07/05/12	Clear	195.6	10.21	0.129	1.77
OB-12-BR	07/30/12	Clear	10.1	10.31	0.102	0.60
OB-12-BR	08/20/12	Clear	-41.7	10.51	0.106	0.33
OB-12-DO	07/05/12	Light brown	389.6	8.05	0.504	1.37
OB-12-DO	07/30/12	Dark Purple	--	--	--	--
OB-12-DO	08/20/12	Dark Purple	--	--	--	--
OB-15-S	07/10/12	Clear	-101.5	6.86	1.522	0.51
OB-15-S	07/11/12	White	-123.9	6.68	1.917	0.71
OB-15-S	07/12/12	White	-130.7	6.57	1.914	0.76

NOTES: -- = Not Analyzed  
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## GROUNDWATER PHYSICAL PARAMETER DATA

**Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts**

Site ID	Date	Color	ORP (mV)	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)
OB-15-S	07/16/12	White	1.7	5.56	1.749	0.45
OB-15-S	07/18/12	White	-89.3	6.72	1.762	0.54
OB-15-S	07/19/12	White	3.7	5.57	0.460	1.75
OB-15-S	07/20/12	White	-38.1	6.37	1.733	0.65
OB-19-BR	07/05/12	Clear	74.1	10.80	1.076	1.28
OB-19-BR	07/30/12	Clear	-104.6	10.84	0.853	0.79
OB-19-BR	08/20/12	Clear	-112.9	10.92	0.872	0.59
OB-19-DO	07/05/12	Clear	--	7.71	0.705	1.57
OB-19-DO	07/30/12	Clear	-77.5	7.20	0.581	0.65
OB-19-DO	08/20/12	Clear	-43.8	7.24	0.584	0.36
OB-25-BR	07/05/12	Clear	-2.0	6.83	2.013	1.86
OB-25-BR	07/30/12	Dark Purple	--	--	--	--
OB-25-BR	08/20/12	Dark Purple	--	--	--	--
OB-25-DO	07/05/12	Clear	-42.1	8.39	0.721	1.71
OB-25-DO	07/30/12	Clear	-57.5	7.91	0.568	0.71
OB-25-DO	08/20/12	Clear	140.8	8.04	0.584	0.80
OB-26-BR	07/05/12	Clear	-154.6	8.96	0.136	1.84
OB-26-BR	07/30/12	Clear	318.2	9.10	0.109	0.62
OB-26-BR	08/20/12	Clear	-167.3	9.21	0.113	0.17
OB-26-DO	07/05/12	Clear	-14.6	7.89	0.310	2.01
OB-26-DO	07/30/12	Clear	-78.2	7.77	0.331	0.53
OB-26-DO	08/20/12	Clear	-83.4	8.07	0.364	0.54
OB-27-BR	07/05/12	Light Purple	--	--	--	--
OB-27-BR	07/30/12	Dark Purple	--	--	--	--
OB-27-BR	08/20/12	Dark Purple	--	--	--	--
OB-34-DO	07/05/12	Clear	499.7	8.76	0.363	3.51
OB-34-DO	07/30/12	Light Purple	--	--	--	--
OB-34-DO	08/20/12	Light Purple	--	--	--	--
OB-35-DO	07/05/12	Light Pink	--	--	--	--
OB-35-DO	07/30/12	Dark Purple	--	--	--	--
OB-35-DO	08/20/12	Dark Purple	--	--	--	--
OB-36-DO	07/05/12	Clear	312.8	8.41	0.428	3.68
OB-36-DO	07/30/12	Clear	145.1	7.25	0.251	6.92
OB-37-DO	07/05/12	Clear	365.2	8.58	0.865	2.28
OB-37-DO	07/30/12	Light Purple	--	--	--	--
OB-38-DO	07/05/12	Clear	-12.5	7.54	3.197	1.66
OB-38-DO	07/15/12	Clear	-12.5	7.54	3.197	1.66
OB-38-DO	07/30/12	Clear	-125.8	7.70	2.512	0.25
OB-38-DO	08/20/12	Clear	-83.0	7.83	2.553	0.38
OB-39-DO	07/05/12	Clear	153.6	8.94	0.207	3.19
OB-39-DO	07/30/12	Clear	-48.6	7.92	0.302	0.85
OB-39-DO	08/20/12	Clear	-35.9	8.02	0.310	0.44
STR-03	08/20/12	Clear	--	--	--	--

NOTES: -- = Not Analyzed  
mV=millivolts

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Deg.C= Degrees Celcius



# GROUNDWATER PHYSICAL PARAMETER DATA

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

Site ID	Date	Color	ORP (mV)	pH	Specific Conductance (mS/cm)	Dissolved Oxygen (mg/L)
UNNAMED_STREAM	08/20/12	Clear	--	--	--	--

NOTES: -- = Not Analyzed  
mV=millivolts

ORP= Oxidation reduction potential  
S/m= Siemens per meter

Deg.C= Degrees Celcius

# WATER LEVEL MONITORING DATA

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
AP-12-BR	03/21/12	71.32	20.10	51.22	
AP-12-BR	04/06/12	71.32	20.33	50.99	
AP-12-BR	07/05/12	71.32	19.89	51.43	
AP-12-BR	07/30/12	71.32	NM	NA	
AP-12-BR	08/20/12	71.32	19.74	51.58	
AP-12-DO	03/21/12	71.30	12.80	58.50	
AP-12-DO	04/05/12	71.30	13.23	58.07	
AP-12-DO	07/05/12	71.30	12.60	58.70	
AP-12-DO	07/30/12	71.30	NM	NA	
AP-12-DO	08/20/12	71.30	NM	NA	
AP-12-S	03/21/12	71.44	10.15	61.29	DTB = 27.30'
AP-12-S	04/05/12	71.44	10.65	60.79	
AP-13-DO	03/19/12	68.86	14.95	53.91	DTB = 52.20'
AP-13-DO	04/03/12	68.86	15.33	53.53	
AP-13-S	03/21/12	68.98	10.75	58.23	DTB = 17.10'
AP-13-S	04/05/12	68.98	11.00	57.98	
AP-14-S	03/21/12	74.97	12.45	62.52	DTB = 30.05'
AP-14-S	04/05/12	74.97	13.07	61.90	
AP-15-S	03/21/12	45.88	4.91	40.97	DTB = 13.13'
AP-15-S	04/05/12	45.88	5.21	40.67	
AP-19	03/20/12	81.30	10.78	70.52	DTB = 28.20'
AP-19	04/05/12	81.30	11.40	69.90	
AP-20	03/20/12	81.43	10.07	71.36	DTB = 16.06'
AP-20	04/05/12	81.43	10.73	70.70	
AP-21	03/20/12	81.50	10.97	70.53	DTB = 23.28'
AP-21	04/05/12	81.50	11.68	69.82	
AP-22	03/20/12	81.96	13.60	68.36	DTB = 18.00'
AP-22	04/05/12	81.96	14.31	67.65	
AP-23-DO	03/19/12	69.46	12.55	56.91	DTB = 48.50'
AP-23-DO	04/03/12	69.46	12.79	56.67	
AP-24-DO	03/19/12	69.56	11.50	58.06	DTB = 48.40'
AP-24-DO	04/03/12	69.56	11.73	57.83	
AP-25-DO	03/19/12	65.58	6.90	58.68	DTB = 47.75'
AP-25-DO	04/03/12	65.58	7.28	58.30	
AP-26-DO	03/21/12	73.99	14.30	59.69	DTB = 62.00'
AP-26-DO	04/05/12	73.99	15.00	58.99	
AP-26-DO	07/05/12	73.99	14.88	59.11	
AP-26-DO	07/30/12	73.99	NM	NA	
AP-26-DO	08/20/12	73.99	NM	NA	

Feet = Measured below surface grade

NM = Not Measured

NA = Not Applicable

## WATER LEVEL MONITORING DATA (Continued)

Former Varian Facility Site  
150 Sohler Road  
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
AP-27-DO	03/22/12	77.34	15.44	61.90	DTB = 58.38'
AP-27-DO	04/06/12	77.34	16.19	61.15	
AP-27-DO	07/05/12	77.34	16.34	61.00	
AP-27-DO	07/30/12	77.34	17.49	59.85	
AP-27-DO	08/20/12	77.34	17.60	59.74	
AP-30R-DO	03/21/12	NA	22.80	NA	
AP-31-DO	03/21/12	NA	20.45	NA	
AP-32-DO	03/21/12	NA	NM	NA	
APBIO-01	03/22/12	42.19	1.50	40.69	DTB = 78.11'
APBIO-01	04/17/12	42.19	1.85	40.34	
B-2	03/22/12	80.40	2.41	77.99	DTB = 12.81'
B-2	04/06/12	80.40	2.59	77.81	
B-3	03/19/12	66.23	8.17	58.06	DTB = 13.45'
B-3	04/03/12	66.23	8.35	57.88	
BR-1_ZONE1	04/02/12	58.60	10.46	48.14	
BR-1_ZONE2	04/02/12	58.60	10.51	48.09	
BR-1_ZONE3	04/02/12	58.60	10.50	48.10	
BR-3_ZONE1	04/17/12	62.36	20.62	41.74	
BR-3_ZONE2	04/17/12	62.36	25.11	37.25	
BR-3_ZONE3	04/17/12	62.36	25.09	37.27	
BR-5_ZONE1	04/17/12	51.04	6.42	44.62	
BR-5_ZONE2	04/17/12	51.04	6.39	44.65	
BR-5_ZONE3	04/17/12	51.04	14.79	36.25	
BR-6_ZONE1	04/17/12	38.33	1.81	36.52	
BR-6_ZONE2	04/17/12	38.33	0.70	37.63	
BR-6_ZONE3	04/17/12	38.33	0.70	37.63	
BW-01	07/10/12	64.71	6.63	58.08	
BW-01	07/11/12	64.71	6.68	58.03	
BW-01	07/12/12	64.71	6.95	57.76	
BW-01	07/16/12	64.71	7.10	57.61	
BW-01	07/18/12	64.71	NM	NA	
BW-01	07/19/12	64.71	6.76	57.95	
BW-01	07/20/12	64.71	6.86	57.85	
BW-01	08/20/12	64.71	NM	NA	
BW-02	07/10/12	65.00	7.10	57.90	
BW-02	07/11/12	65.00	7.23	57.77	
BW-02	07/12/12	65.00	NM	NA	

Feet = Measured below surface grade

NM = Not Measured

NA = Not Applicable

## WATER LEVEL MONITORING DATA (Continued)

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
BW-02	07/16/12	65.00	NM	NA	
BW-02	07/18/12	65.00	NM	NA	
BW-02	07/19/12	65.00	7.32	57.68	
BW-02	07/20/12	65.00	7.45	57.55	
BW-02	08/20/12	65.00	7.12	57.88	
BW-03	07/10/12	65.18	7.83	57.35	
BW-03	07/11/12	65.18	7.86	57.32	
BW-03	07/12/12	65.18	7.92	57.26	
BW-03	07/16/12	65.18	NM	NA	
BW-03	07/18/12	65.18	NM	NA	
BW-03	07/19/12	65.18	NM	NA	
BW-03	07/20/12	65.18	7.67	57.51	
BW-03	08/20/12	65.18	7.36	57.82	
BW-04	03/19/12	65.01	7.10	57.91	DTB = 13.30'
BW-04	04/03/12	65.01	7.21	57.80	
BW-04	07/10/12	65.01	7.66	57.35	
BW-04	07/11/12	65.01	7.71	57.30	
BW-04	07/12/12	65.01	7.74	57.27	
BW-04	07/16/12	65.01	7.90	57.11	
BW-04	07/18/12	65.01	7.96	57.05	
BW-04	07/19/12	65.01	7.34	57.67	
BW-04	07/20/12	65.01	7.48	57.53	
BW-04	08/02/12	65.01	7.53	57.48	DTB = 13.35'
BW-04	08/21/12	65.01	7.47	57.54	
BW-05	03/19/12	65.17	8.25	56.92	DTB = 10.35'
BW-05	04/03/12	65.17	7.35	57.82	
BW-05	07/10/12	65.17	7.82	57.35	
BW-05	07/11/12	65.17	7.84	57.33	
BW-05	07/12/12	65.17	NM	NA	
BW-05	07/16/12	65.17	NM	NA	
BW-05	07/18/12	65.17	NM	NA	
BW-05	07/19/12	65.17	7.44	57.73	
BW-05	07/20/12	65.17	7.61	57.56	
BW-05	08/02/12	65.17	7.66	57.51	DTB = 10.41'
BW-05	08/21/12	65.17	7.62	57.55	
BW-06	03/19/12	65.44	7.60	57.84	DTB = 14.20'
BW-06	04/03/12	65.44	7.76	57.68	
BW-06	07/10/12	65.44	8.19	57.25	
BW-06	07/11/12	65.44	8.24	57.20	
BW-06	07/12/12	65.44	7.26	58.18	
BW-06	07/16/12	65.44	8.39	57.05	
BW-06	07/18/12	65.44	8.46	56.98	
BW-06	07/19/12	65.44	NM	NA	
BW-06	07/20/12	65.44	NM	NA	
BW-06	08/02/12	65.44	8.02	57.42	DTB = 14.31'
BW-06	08/21/12	65.44	7.95	57.49	

Feet = Measured below surface grade

NM = Not Measured

NA = Not Applicable

## WATER LEVEL MONITORING DATA (Continued)

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
BW-08	03/19/12	65.44	7.70	57.74	DTB = 14.45'
BW-08	04/03/12	65.44	7.76	57.68	
BW-08	07/10/12	65.44	8.22	57.22	
BW-08	07/11/12	65.44	8.23	57.21	
BW-08	07/12/12	65.44	NM	NA	
BW-08	07/16/12	65.44	NM	NA	
BW-08	07/18/12	65.44	NM	NA	
BW-08	07/19/12	65.44	7.87	57.57	
BW-08	07/20/12	65.44	8.19	57.25	
BW-08	08/02/12	65.44	8.11	57.33	DTB = 14.97'
BW-08	08/21/12	65.44	8.01	57.43	
BW-09	03/19/12	65.30	7.60	57.70	DTB = 13.15'
BW-09	04/03/12	65.30	7.70	57.60	
BW-09	07/10/12	65.30	8.11	57.19	
BW-09	07/11/12	65.30	8.17	57.13	
BW-09	07/12/12	65.30	NM	NA	
BW-09	07/16/12	65.30	NM	NA	
BW-09	07/18/12	65.30	NM	NA	
BW-09	07/19/12	65.30	7.76	57.54	
BW-09	07/20/12	65.30	7.94	57.36	
BW-09	08/02/12	65.30	8.00	57.30	DTB = 13.15'
BW-09	08/21/12	65.30	7.92	57.38	
BW-10	07/10/12	65.25	8.03	57.22	
BW-10	07/11/12	65.25	8.09	57.16	
BW-10	07/12/12	65.25	8.13	57.12	
BW-10	07/16/12	65.25	8.23	57.02	
BW-10	07/18/12	65.25	8.30	56.95	
BW-10	07/19/12	65.25	7.71	57.54	
BW-10	07/20/12	65.25	7.89	57.36	
BW-10	08/20/12	65.25	7.82	57.43	
CL02-BR	03/19/12	62.79	6.73	56.06	DTB = 42.50'
CL02-BR	04/03/12	62.79	8.31	54.48	
CL02-BR	07/05/12	62.79	7.35	55.44	
CL02-BR	07/30/12	62.79	8.06	54.73	
CL02-BR	08/20/12	62.79	NM	NA	
CL02-DO	07/05/12	62.76	7.50	55.26	
CL02-DO	07/30/12	62.76	8.24	54.52	
CL02-DO	08/20/12	62.76	NM	NA	
CL03-BR	07/05/12	50.39	8.64	41.75	
CL03-BR	07/30/12	50.39	9.05	41.34	
CL03-BR	08/20/12	50.39	9.17	41.22	
CL03-DO	03/21/12	50.40	9.00	41.40	DTB = 76.92'
CL03-DO	04/06/12	50.40	9.33	41.07	

Feet = Measured below surface grade

NM = Not Measured

NA = Not Applicable

## WATER LEVEL MONITORING DATA (Continued)

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
CL03-S	03/21/12	50.21	8.88	41.33	DTB = 19.10'
CL03-S	04/06/12	50.21	9.21	41.00	
CL04-BR	03/20/12	47.78	6.32	41.46	DTB = 55.45'
CL04-BR	04/04/12	47.78	6.67	41.11	
CL04-DO	03/20/12	47.42	5.83	41.59	DTB = 28.39'
CL04-DO	04/04/12	47.42	6.22	41.20	
CL06-BR	03/21/12	58.41	9.78	48.63	DTB = 69.27'
CL06-BR	04/04/12	58.41	10.03	48.38	
CL06-DO	03/21/12	58.75	9.93	48.82	DTB = 42.13'
CL06-DO	04/04/12	58.75	9.90	48.85	
CL08-BR_ZONE1	04/17/12	48.28	9.69	38.59	
CL08-BR_ZONE2	04/17/12	48.28	16.95	31.33	
CL08-BR_ZONE3	04/17/12	48.28	7.27	41.01	
CL08-DO	03/20/12	47.85	6.20	41.65	DTB = 52.58'
CL08-DO	04/17/12	47.85	6.87	40.98	
CL09-BR_ZONE1	04/17/12	47.65	16.65	31.00	
CL09-BR_ZONE2	04/17/12	47.65	1.18	46.47	
CL09-BR_ZONE3	04/17/12	47.65	1.08	46.57	
CL09-DO	03/19/12	47.43	5.25	42.18	DTB = 33.82'
CL09-DO	04/02/12	47.43	5.70	41.73	
CL10-BR	03/20/12	72.28	3.69	68.59	DTB = 45.65'
CL10-BR	04/05/12	72.28	4.57	67.71	
CL10-DO	03/20/12	72.54	3.52	69.02	DTB = 31.47'
CL10-DO	04/06/12	72.54	4.21	68.33	
CL10-S	03/20/12	72.54	2.93	69.61	DTB = 14.18'
CL10-S	04/05/12	72.54	3.60	68.94	
CL11-DO	03/22/12	68.72	20.14	48.58	DTB = 50.40'
CL11-DO	04/06/12	68.72	20.76	47.96	
CL11-S	03/22/12	68.46	17.63	50.83	DTB = 24.62'
CL11-S	04/06/12	68.46	18.40	50.06	
GZ-1	03/21/12	48.28	7.32	40.96	DTB = 13.38'
GZ-1	04/05/12	48.28	7.63	40.65	
GZ-4	03/21/12	45.13	NM	NA	DTB = 15.22'
GZ-4	04/05/12	45.13	5.82	39.31	DTB = 15.21'
MW-002R	03/19/12	62.59	4.52	58.07	DTB = 10.55'
MW-002R	04/02/12	62.59	4.78	57.81	
MW-002R	07/05/12	62.59	5.10	57.49	

Feet = Measured below surface grade

NM = Not Measured

NA = Not Applicable

## WATER LEVEL MONITORING DATA (Continued)

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
MW-002R	07/30/12	62.59	5.66	56.93	
MW-002R	08/20/12	62.59	NM	NA	
MW-003R	03/19/12	61.28	3.36	57.92	DTB = 31.20'
MW-003R	04/02/12	61.28	3.69	57.59	
MW-004R	03/19/12	62.63	6.59	56.04	DTB = 36.55'
MW-004R	04/02/12	62.63	6.94	55.69	
MW-005R	03/19/12	62.78	4.82	57.96	DTB = 18.25'
MW-005R	04/02/12	62.78	5.25	57.53	
MW-008	03/19/12	68.96	11.45	57.51	DTB = 17.90'
MW-008	04/04/12	68.96	11.60	57.36	
MW-008	07/10/12	68.96	11.84	57.12	
MW-008	07/11/12	68.96	11.92	57.04	
MW-008	07/12/12	68.96	11.94	57.02	
MW-008	07/16/12	68.96	12.02	56.94	
MW-008	07/18/12	68.96	12.01	56.95	
MW-008	07/19/12	68.96	12.62	56.34	
MW-008	07/20/12	68.96	11.78	57.18	
MW-008	08/02/12	68.96	11.88	57.08	DTB = 17.84'
MW-008	08/21/12	68.96	11.83	57.13	
MW-009	03/19/12	63.48	5.40	58.08	DTB = 20.75'
MW-009	04/04/12	63.48	5.55	57.93	
MW-009	07/10/12	63.48	5.98	57.50	
MW-009	07/11/12	63.48	6.30	57.18	
MW-009	07/12/12	63.48	6.09	57.39	
MW-009	07/16/12	63.48	6.24	57.24	
MW-009	07/18/12	63.48	6.34	57.14	
MW-009	07/19/12	63.48	NM	NA	
MW-009	07/20/12	63.48	NM	NA	
MW-009	08/02/12	63.48	8.15	55.33	DTB = 20.78'
MW-009	08/21/12	63.48	NM	NA	
MW-009A	03/19/12	63.86	5.80	58.06	DTB = 14.35'
MW-009A	04/03/12	63.86	5.97	57.89	
MW-013	03/21/12	69.11	10.90	58.21	
MW-013	04/05/12	69.11	11.12	57.99	
MW-014A	03/21/12	75.59	16.70	58.89	DTB = 60.00'
MW-014A	04/05/12	75.59	17.80	57.79	
MW-033B	03/21/12	91.16	3.21	87.95	DTB = 25.85'
MW-033B	04/06/12	91.16	4.52	86.64	
MW-034	03/21/12	35.30	0.01	35.29	DTB = 64.10'
MW-036	03/21/12	52.64	11.82	40.82	DTB = 52.81'
MW-036	04/06/12	52.64	11.75	40.89	

Feet = Measured below surface grade

NM = Not Measured

NA = Not Applicable

# WATER LEVEL MONITORING DATA (Continued)

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
MW-1_32-TOZER	03/22/12	64.03	10.29	53.74	DTB = 18.99'
MW-1_32-TOZER	04/06/12	64.03	11.07	52.96	
MW-2_32-TOZER	03/21/12	70.83	4.80	66.03	DTB = 18.30'
MW-2_32-TOZER	04/06/12	70.83	5.51	65.32	
MW-3_32-TOZER	03/21/12	67.91	5.28	62.63	DTB = 19.48'
MW-3_32-TOZER	04/06/12	67.91	5.48	62.43	
OB-04-BR	03/19/12	54.40	11.90	42.50	DTB = 89.10'
OB-04-BR	04/03/12	54.40	11.96	42.44	
OB-04-DO	03/19/12	54.35	12.57	41.78	DTB = 68.12'
OB-04-DO	04/03/12	54.35	12.92	41.43	
OB-04-S	03/19/12	53.98	12.76	41.22	DTB = 24.43'
OB-04-S	04/03/12	53.98	13.07	40.91	
OB-05-BR	03/19/12	49.01	7.64	41.37	DTB = 105.30'
OB-05-BR	04/03/12	49.01	8.00	41.01	
OB-05-DO	03/19/12	49.06	7.82	41.24	DTB = 82.35'
OB-05-DO	04/03/12	49.06	8.15	40.91	
OB-05-S	03/19/12	49.34	5.12	44.22	DTB = 26.06'
OB-05-S	04/03/12	49.34	8.40	40.94	
OB-06-BR	03/20/12	48.70	6.33	42.37	DTB = 90.10'
OB-06-BR	04/03/12	48.70	7.61	41.09	
OB-06-DO	03/20/12	49.21	7.83	41.38	DTB = 66.45'
OB-06-DO	04/03/12	49.21	8.17	41.04	
OB-08-DO	03/19/12	38.29	0.00	38.29	DTB = 78.10'
OB-08-DO	04/03/12	38.29	0.01	38.28	
OB-08-S	03/19/12	38.36	5.97	32.39	DTB = 13.00'
OB-08-S	04/02/12	38.36	6.18	32.18	
OB-09-BR	03/19/12	65.25	9.20	56.05	DTB = 118.45'
OB-09-BR	04/04/12	65.25	9.72	55.53	
OB-09-BR	08/02/12	65.25	10.42	54.83	DTB = 101.00'
OB-09-BR	08/21/12	65.25	10.12	55.13	
OB-09-DO	03/19/12	65.11	9.15	55.96	DTB = 93.20'
OB-09-DO	04/04/12	65.11	9.63	55.48	
OB-09-DO	07/10/12	65.11	9.98	55.13	
OB-09-DO	07/12/12	65.11	10.07	55.04	
OB-09-DO	07/16/12	65.11	10.16	54.95	
OB-09-DO	07/18/12	65.11	10.21	54.90	
OB-09-DO	07/19/12	65.11	10.19	54.92	
OB-09-DO	07/20/12	65.11	10.17	54.94	
OB-09-DO	08/02/12	65.11	10.45	54.66	DTB = 93.09'
OB-09-DO	08/21/12	65.11	10.08	55.03	

Feet = Measured below surface grade

NM = Not Measured

NA = Not Applicable



## WATER LEVEL MONITORING DATA (Continued)

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
OB-09-S	03/19/12	65.22	7.40	57.82	DTB = 24.35'
OB-09-S	04/04/12	65.22	7.50	57.72	
OB-09-S	07/10/12	65.22	7.93	57.29	
OB-09-S	07/11/12	65.22	7.97	57.25	
OB-09-S	07/12/12	65.22	NM	NA	
OB-09-S	07/16/12	65.22	NM	NA	
OB-09-S	07/18/12	65.22	NM	NA	
OB-09-S	07/19/12	65.22	NM	NA	
OB-09-S	07/20/12	65.22	NM	NA	
OB-09-S	08/02/12	65.22	8.35	56.87	DTB = 24.30'
OB-09-S	08/21/12	65.22	7.70	57.52	
OB-10-BR	03/21/12	71.04	17.90	53.14	DTB = 74.10'
OB-10-BR	04/06/12	71.04	18.33	52.71	
OB-10-DO	03/19/12	71.00	12.75	58.25	DTB = 46.90'
OB-10-DO	04/04/12	71.00	13.28	57.72	
OB-10-DO	07/05/12	71.00	12.65	58.35	
OB-10-DO	07/30/12	71.00	13.52	57.48	
OB-10-DO	08/20/12	71.00	13.02	57.98	
OB-10-S	03/19/12	70.91	10.75	60.16	DTB = 30.10'
OB-10-S	04/04/12	70.91	11.44	59.47	
OB-10-S	08/02/12	70.91	11.48	59.43	DTB = 30.11'
OB-10-S	08/21/12	70.91	10.50	60.41	
OB-11-BR	03/21/12	75.37	21.55	53.82	DTB = 87.11'
OB-11-BR	04/05/12	75.37	21.97	53.40	
OB-11-DO	03/21/12	75.50	19.55	55.95	DTB = 60.85'
OB-11-DO	04/05/12	75.50	20.04	55.46	
OB-12-BR	07/05/12	73.67	20.35	53.32	
OB-12-BR	07/30/12	73.67	20.99	52.68	
OB-12-BR	08/20/12	73.67	20.73	52.94	
OB-12-DO	03/21/12	73.54	15.50	58.04	DTB = 49.80'
OB-12-DO	04/04/12	73.54	15.77	57.77	
OB-12-DO	04/05/12	73.54	15.93	57.61	
OB-12-DO	07/05/12	73.54	15.67	57.87	
OB-12-DO	07/30/12	73.54	NM	NA	
OB-12-DO	08/20/12	73.54	NM	NA	
OB-12-S	03/19/12	73.46	13.30	60.16	DTB = 27.35'
OB-12-S	04/04/12	73.46	13.71	59.75	
OB-12-S	08/02/12	73.46	14.55	58.91	DTB = 28.71'
OB-12-S	08/21/12	73.46	14.21	59.25	
OB-14-DO	03/21/12	75.05	13.80	61.25	DTB = 56.45'
OB-14-DO	04/05/12	75.05	14.40	60.65	

Feet = Measured below surface grade

NM = Not Measured

NA = Not Applicable

## WATER LEVEL MONITORING DATA (Continued)

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
OB-15-S	03/19/12	63.26	5.18	58.08	DTB = 19.75'
OB-15-S	04/04/12	63.26	5.32	57.94	
OB-15-S	07/10/12	63.26	5.81	57.45	
OB-15-S	07/11/12	63.26	6.90	56.36	
OB-15-S	07/12/12	63.26	NM	NA	
OB-15-S	07/16/12	63.26	NM	NA	
OB-15-S	07/18/12	63.26	NM	NA	
OB-15-S	07/19/12	63.26	NM	NA	
OB-15-S	07/20/12	63.26	NM	NA	
OB-15-S	08/02/12	63.26	5.80	57.46	DTB = 19.60'
OB-15-S	08/21/12	63.26	NM	NA	
OB-16-BR	03/20/12	67.61	5.93	61.68	DTB = 33.00'
OB-16-BR	04/05/12	67.61	5.80	61.81	
OB-16-S	03/20/12	67.69	6.99	60.70	DTB = 16.60'
OB-16-S	04/05/12	67.69	6.70	60.99	
OB-17-BR	03/19/12	49.19	4.99	44.20	DTB = 99.00'
OB-17-BR	04/02/12	49.19	6.65	42.54	
OB-17-DO	03/19/12	48.86	5.65	43.21	DTB = 42.24'
OB-17-DO	04/02/12	48.86	5.49	43.37	
OB-18-DO	03/21/12	45.10	3.92	41.18	DTB = 24.83'
OB-18-DO	04/05/12	45.10	4.22	40.88	
OB-18-S	03/21/12	44.98	4.11	40.87	DTB = 12.28'
OB-18-S	04/05/12	44.98	4.45	40.53	
OB-19-BR	07/05/12	74.26	22.64	51.62	
OB-19-BR	07/30/12	74.26	23.18	51.08	
OB-19-BR	08/20/12	74.26	22.97	51.29	
OB-19-DO	03/19/12	74.28	16.55	57.73	DTB = 57.85'
OB-19-DO	04/04/12	74.28	17.15	57.13	
OB-19-DO	04/05/12	74.28	17.27	57.01	
OB-19-DO	07/05/12	74.28	17.26	57.02	
OB-19-DO	07/30/12	74.28	17.47	56.81	
OB-19-DO	08/20/12	74.28	18.09	56.19	
OB-19-S	03/21/12	73.96	9.50	64.46	DTB = 33.75'
OB-19-S	04/05/12	73.96	10.35	63.61	
OB-20-BR	03/22/12	43.85	2.94	40.91	DTB = 95.75'
OB-20-BR	04/06/12	43.85	3.24	40.61	
OB-20-DO	03/22/12	43.98	2.97	41.01	DTB = 75.48'
OB-20-DO	04/06/12	43.98	3.29	40.69	
OB-20-S	03/22/12	43.79	2.83	40.96	DTB = 11.90'
OB-20-S	04/06/12	43.79	3.11	40.68	

Feet = Measured below surface grade

NM = Not Measured

NA = Not Applicable

## WATER LEVEL MONITORING DATA (Continued)

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
OB-21-BR	03/22/12	43.88	3.00	40.88	DTB = 100.75'
OB-21-BR	04/06/12	43.88	3.30	40.58	
OB-21-DO	03/22/12	43.28	2.40	40.88	DTB = 79.52'
OB-21-DO	04/06/12	43.28	2.71	40.57	
OB-23-BR	03/21/12	56.48	9.12	47.36	DTB = 84.22'
OB-23-BR	04/05/12	56.48	9.52	46.96	DTB = 84.50'
OB-24-S	03/20/12	44.24	1.61	42.63	DTB = 2.60'
OB-24-S	04/05/12	44.24	2.06	42.18	
OB-25-BR	03/21/12	74.26	22.70	51.56	DTB = 91.30'
OB-25-BR	04/05/12	74.26	23.06	51.20	
OB-25-BR	07/05/12	74.26	22.84	51.42	
OB-25-BR	07/30/12	74.26	NM	NA	
OB-25-BR	08/20/12	74.26	NM	NA	
OB-25-DO	07/05/12	74.52	22.40	52.12	
OB-25-DO	07/30/12	74.52	22.74	51.78	
OB-25-DO	08/20/12	74.52	22.77	51.75	
OB-26-BR	04/17/12	74.44	22.07	52.37	
OB-26-BR	07/05/12	74.44	21.64	52.80	
OB-26-BR	07/30/12	74.44	22.05	52.39	
OB-26-BR	08/20/12	74.44	22.08	52.36	
OB-26-DO	07/05/12	74.48	15.26	59.22	
OB-26-DO	07/30/12	74.48	16.52	57.96	
OB-26-DO	08/20/12	74.48	16.76	57.72	
OB-27-BR	03/21/12	71.68	26.40	45.28	
OB-27-BR	04/06/12	71.68	27.07	44.61	
OB-27-BR	07/05/12	71.68	26.77	44.91	
OB-27-BR	07/30/12	71.68	NM	NA	
OB-27-BR	08/20/12	71.68	NM	NA	
OB-28-BR	03/21/12	74.35	21.25	53.10	DTB = 90.80'
OB-28-BR	04/05/12	74.35	21.69	52.66	
OB-32-DO	03/21/12	75.70	12.50	63.20	
OB-32-DO	04/05/12	75.70	13.01	62.69	
OB-34-DO	03/21/12	75.10	17.20	57.90	
OB-34-DO	04/05/12	75.10	17.67	57.43	
OB-34-DO	07/05/12	75.10	17.50	57.60	
OB-34-DO	07/30/12	75.10	18.38	56.72	
OB-34-DO	08/20/12	75.10	18.14	56.96	
OB-35-DO	03/22/12	81.41	9.38	72.03	DTB = 49.36'
OB-35-DO	04/06/12	81.41	10.35	71.06	
OB-35-DO	07/05/12	81.41	12.42	68.99	
OB-35-DO	07/30/12	81.41	NM	NA	

Feet = Measured below surface grade

NM = Not Measured

NA = Not Applicable

## WATER LEVEL MONITORING DATA (Continued)

Former Varian Facility Site  
150 Sohier Road  
Beverly, Massachusetts

Location	Date	Reference Elevation (Feet)	Depth to Water (Feet)	Groundwater Elevation (Feet)	Notes
OB-35-DO	08/20/12	81.41	NM	NA	
OB-36-DO	03/22/12	75.92	NM	NA	DTB = 42.00'
OB-36-DO	04/06/12	75.92	18.52	57.40	
OB-36-DO	07/05/12	75.92	20.86	55.06	
OB-36-DO	07/30/12	75.92	19.12	56.80	
OB-36-DO	08/20/12	75.92	NM	NA	
OB-37-DO	03/22/12	75.86	18.95	56.91	DTB = 46.95'
OB-37-DO	04/06/12	75.86	20.07	55.79	
OB-37-DO	07/05/12	75.86	23.11	52.75	
OB-37-DO	07/30/12	75.86	20.02	55.84	
OB-37-DO	08/20/12	75.86	NM	NA	
OB-38-DO	03/22/12	77.45	7.55	69.90	DTB = 45.80'
OB-38-DO	04/06/12	77.45	8.39	69.06	
OB-38-DO	07/05/12	77.45	8.27	69.18	
OB-38-DO	07/30/12	77.45	9.10	68.35	
OB-38-DO	08/20/12	77.45	8.91	68.54	
OB-39-DO	07/05/12	79.01	18.19	60.82	
OB-39-DO	07/30/12	79.01	19.34	59.67	
OB-39-DO	08/20/12	79.01	19.47	59.54	
OB-41-S	03/21/12	33.26	4.28	28.98	DTB = 14.38'
OB-41-S	04/05/12	33.26	4.35	28.91	
OB-42-S	03/21/12	51.40	5.88	45.52	DTB = 14.65'
OB-42-S	04/04/12	51.40	6.08	45.32	
OB-43-S	03/21/12	52.58	11.45	41.13	DTB = 15.95'
OB-43-S	04/04/12	52.58	11.70	40.88	
P-09R	03/22/12	37.86	3.95	33.91	DTB = 4.46'
P-09R	04/06/12	37.86	4.07	33.79	
P-11R	03/20/12	47.92	6.45	41.47	DTB = 9.61'
P-11R	04/05/12	47.92	6.85	41.07	
P-19A	03/22/12	47.51	8.15	39.36	DTB = 10.40'
P-19A	04/06/12	47.51	8.56	38.95	
P-20R	03/22/12	42.56	2.02	40.54	DTB = 11.18'
P-20R	04/06/12	42.56	2.35	40.21	
RW-22	03/22/12	75.15	21.98	53.17	DTB = 63.88'
RW-22	04/05/12	75.15	22.31	52.84	
W-1	03/21/12	51.37	4.85	46.52	DTB = 12.25'
W-1	04/05/12	51.37	5.00	46.37	

Feet = Measured below surface grade

NM = Not Measured

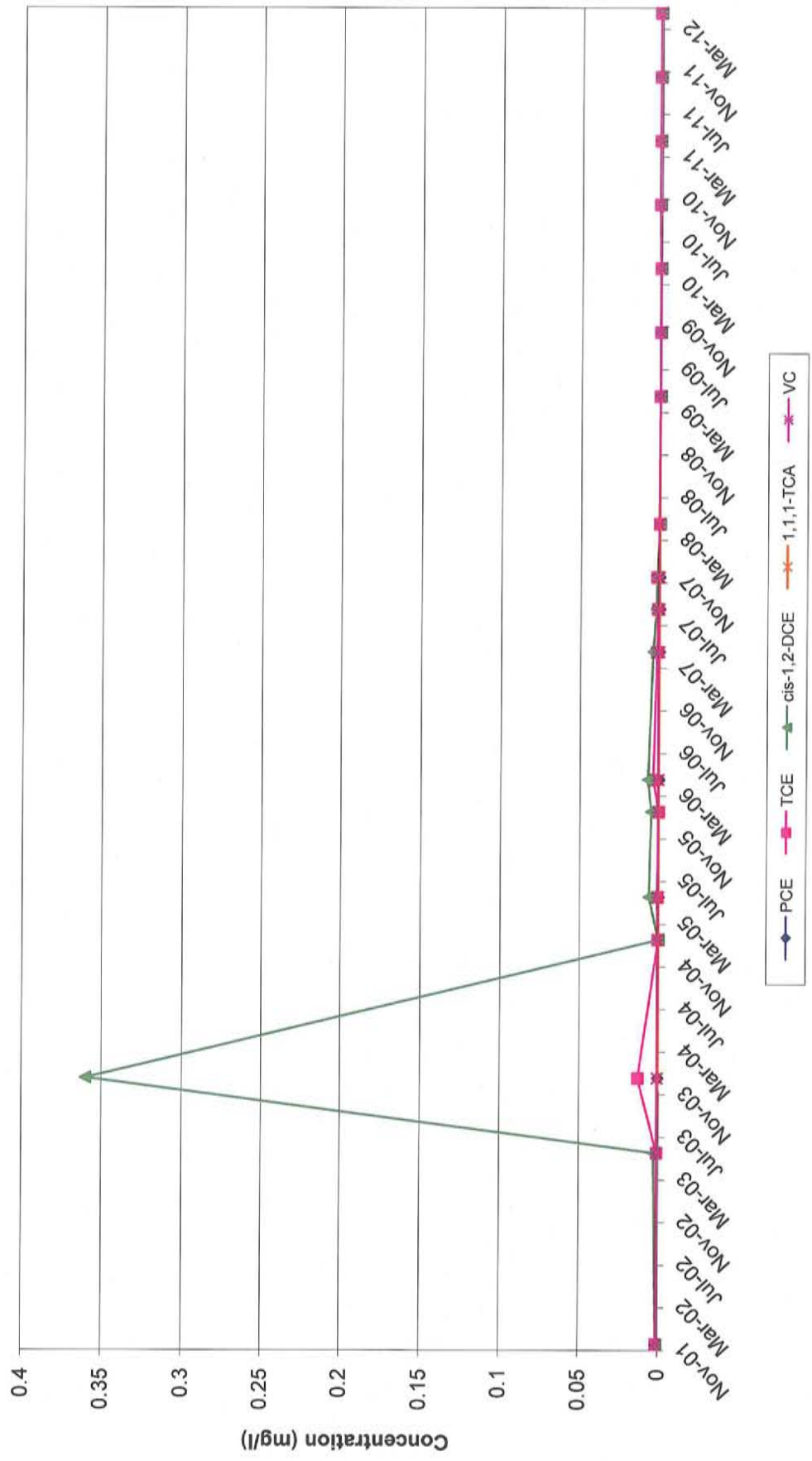
NA = Not Applicable

**APPENDIX D**

**VOC TREND GRAPHS**

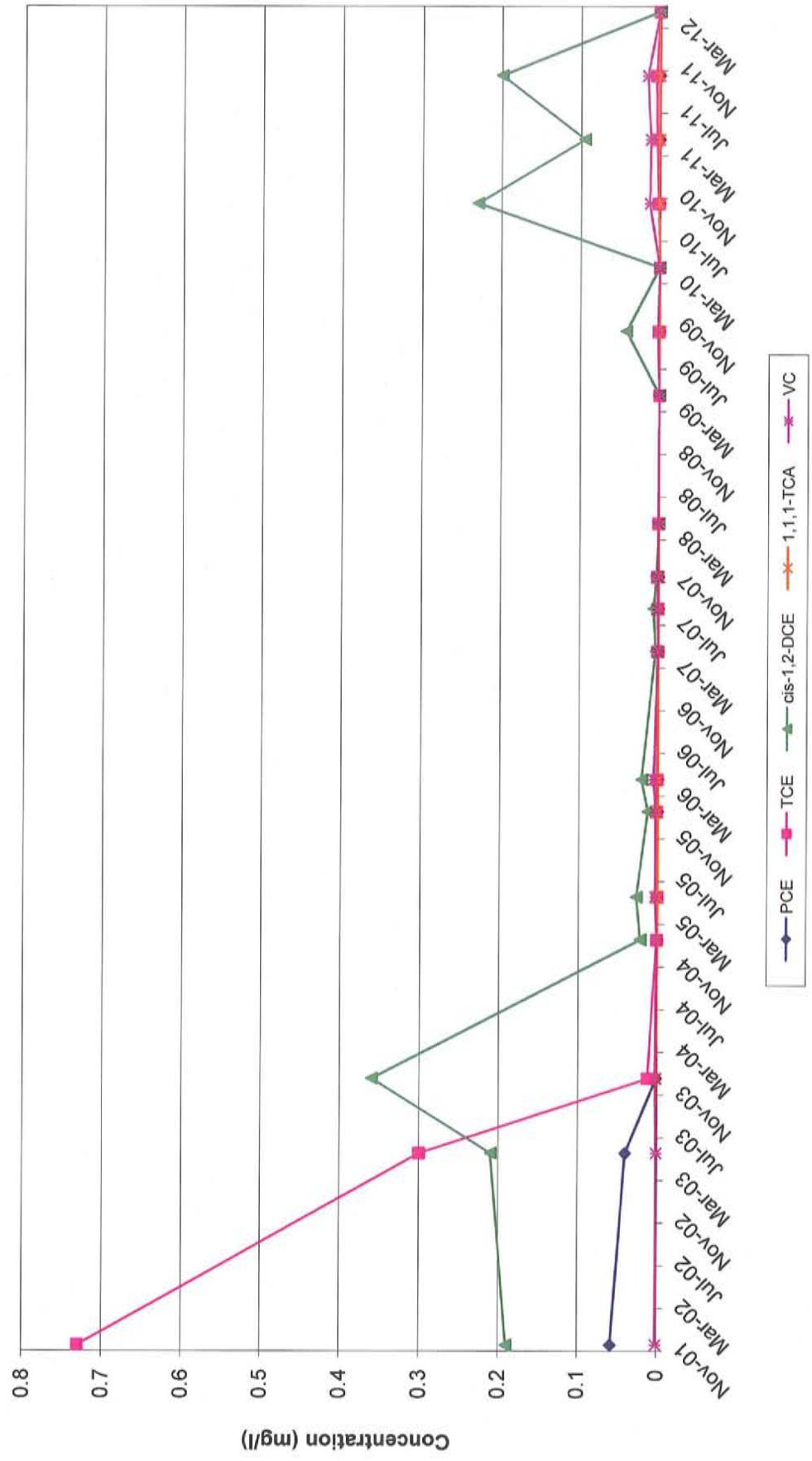
TOZER ROAD NORTH OF ROUTE 128

VOC Trends in Well BR-1\_ZONE3  
 Former Varian Facility Site  
 Beverly, Massachusetts



Notes: BR-1\_ZONE3 is the shallowest zone of a bedrock well on Walden Street.  
 See end of appendix for additional notes.

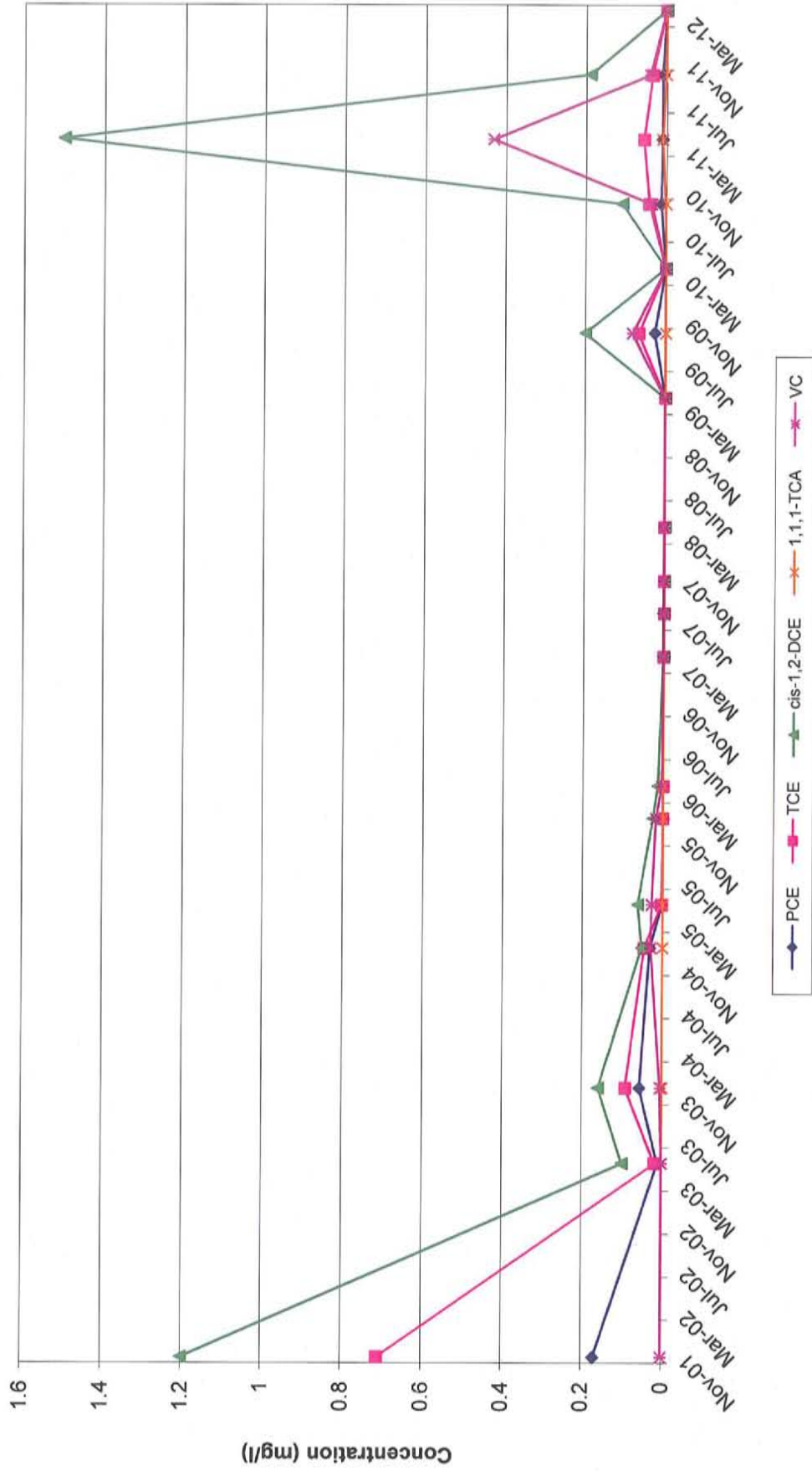
VOC Trends in Well BR-1\_ZONE2  
 Former Varian Facility Site  
 Beverly, Massachusetts



Notes: BR-1\_ZONE2 is the middle depth zone of a bedrock well on Walden Street.  
 See end of appendix for additional notes.

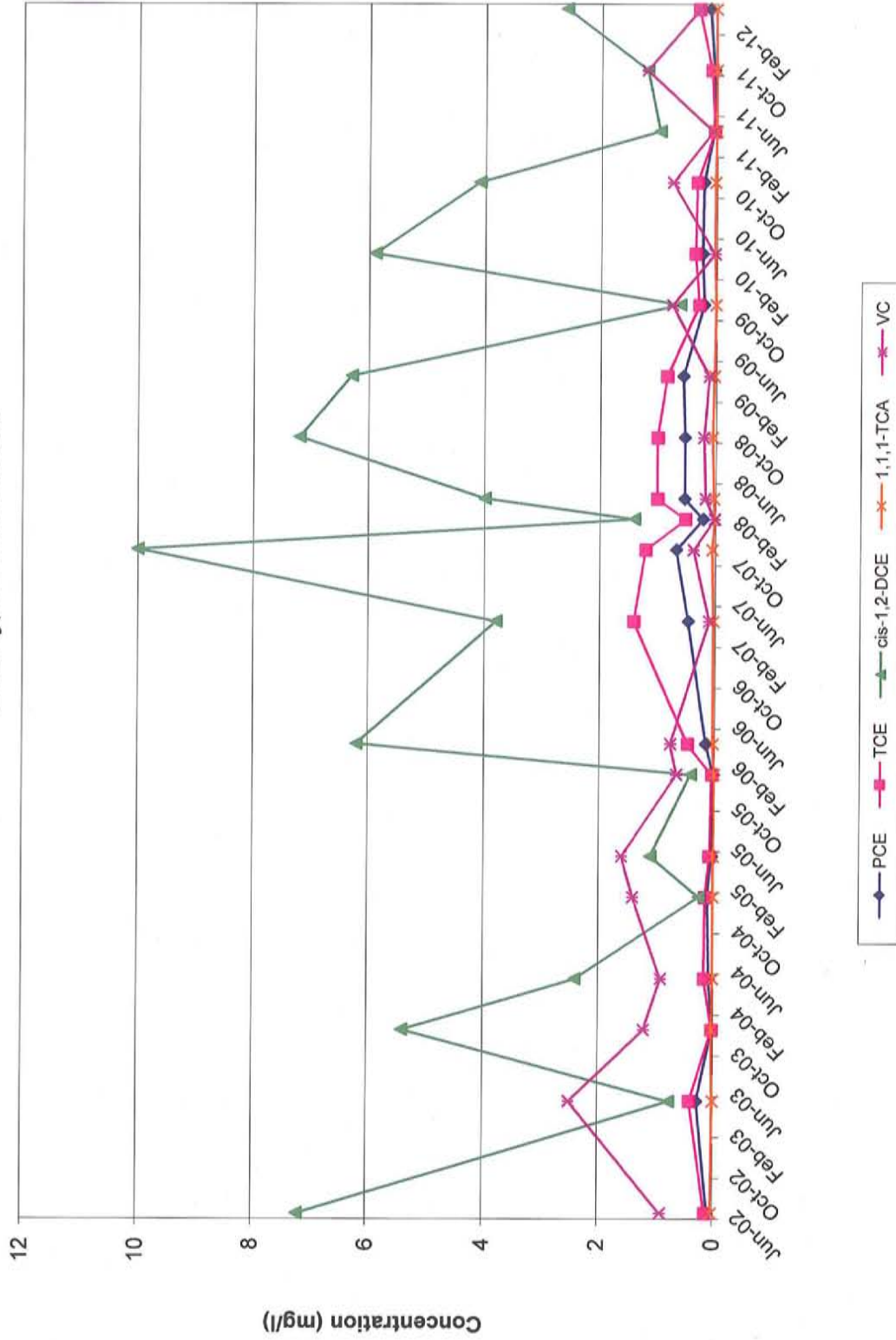


VOC Trends in Well BR-1\_ZONE1  
Former Varian Facility Site  
Beverly, Massachusetts



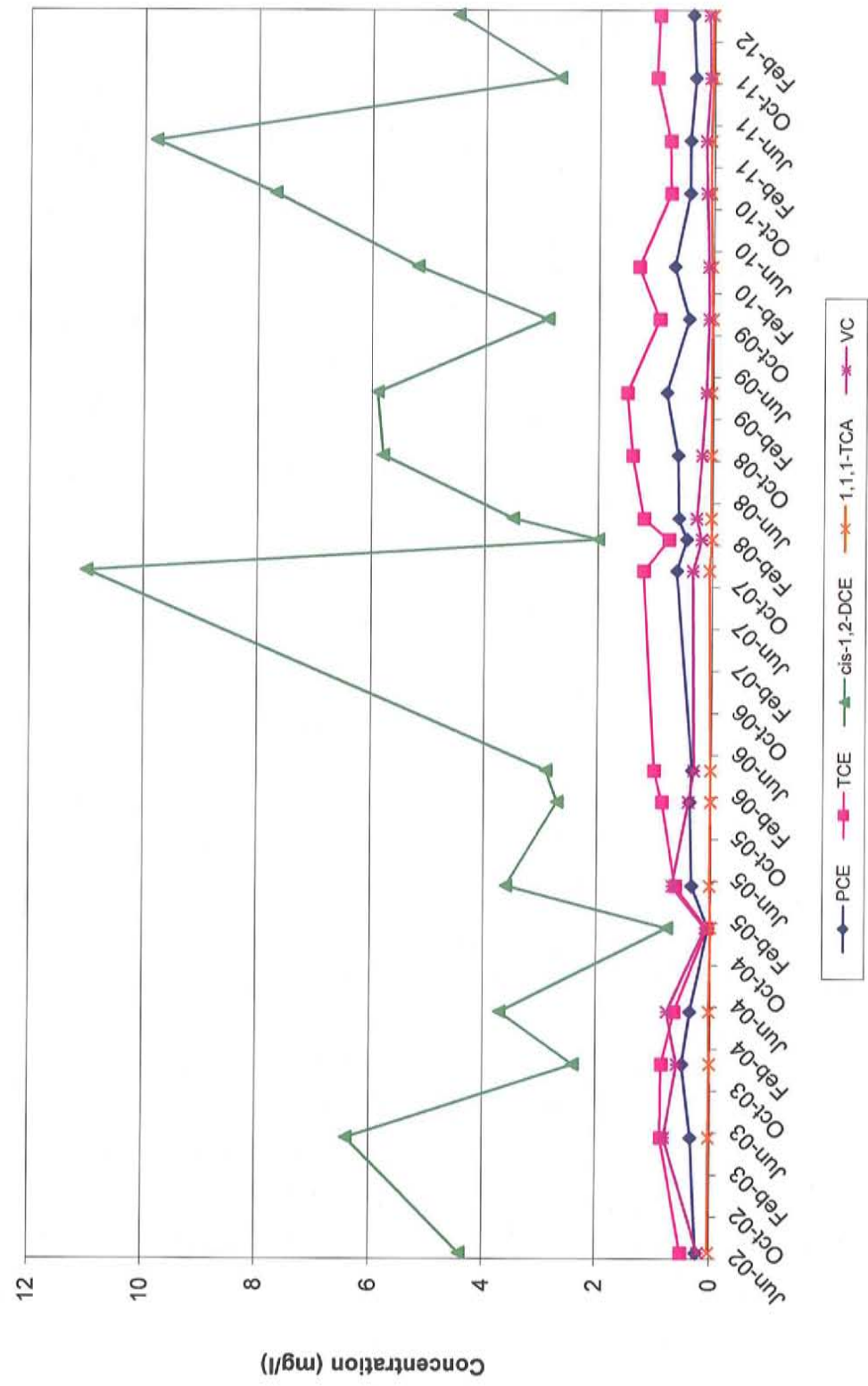
Notes: BR-1\_ZONE1 is the deepest zone of a bedrock well on Walden Street.  
See end of appendix for additional notes.

VOC Trends in Well CL09-BR\_ZONE3  
Former Varian Facility Site  
Beverly, Massachusetts



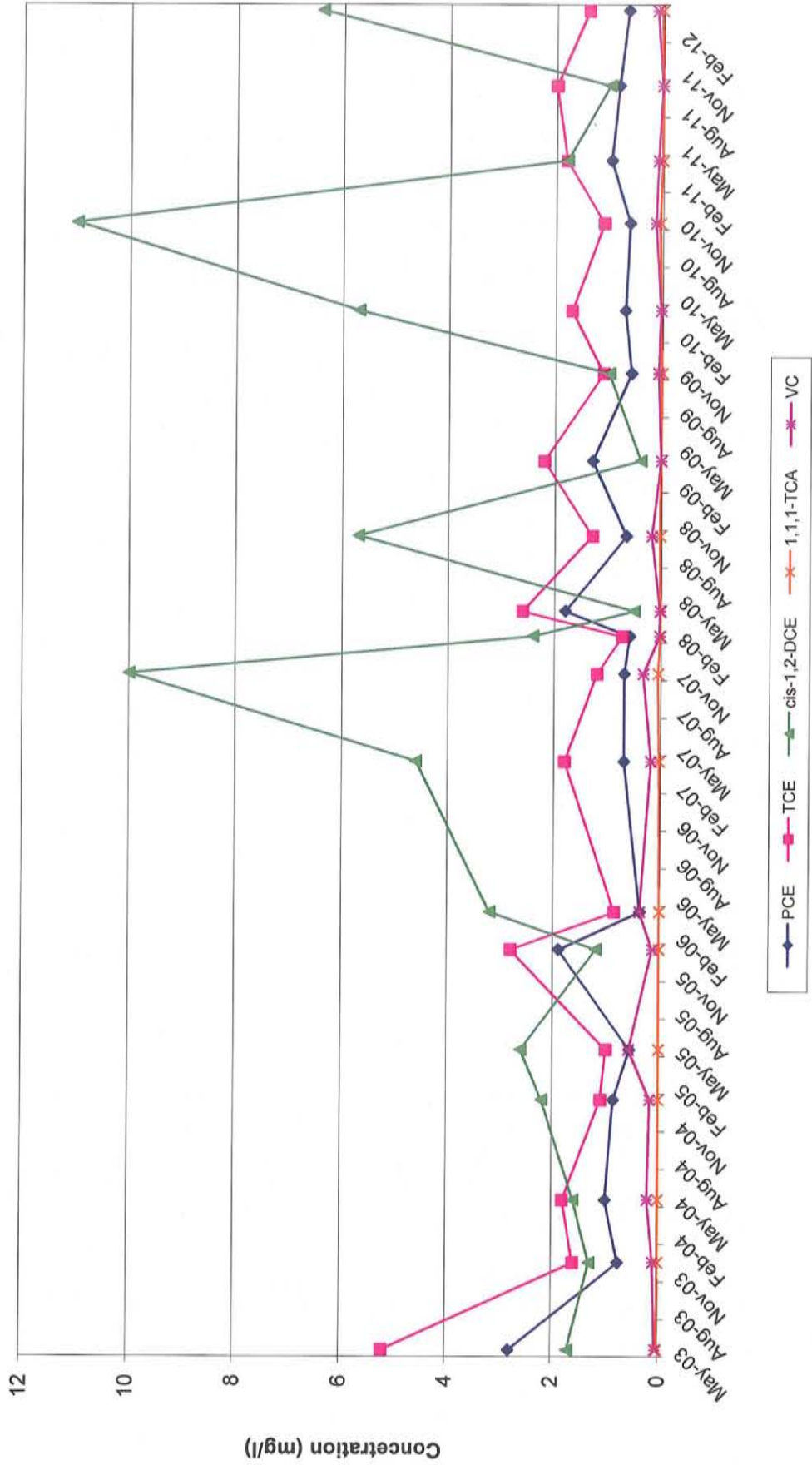
Notes: CL09-BR\_ZONE3 is the shallowest zone of a bedrock well north of Route 128, west of Tozer Road. See end of appendix for additional notes.

VOC Trends in Well CL09-BR\_ZONE2  
 Former Varian Facility Site  
 Beverly, Massachusetts



Notes: CL09-BR\_ZONE2 is the middle depth zone of a bedrock well north of Route 128, west of Tozer Road. See end of appendix for additional notes.

VOCs in Well CL09-BR\_ZONE1  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: CL09-BR\_ZONE1 is the deepest zone of a bedrock well north of Route 128, west of Tozer Road. See end of appendix for additional notes.

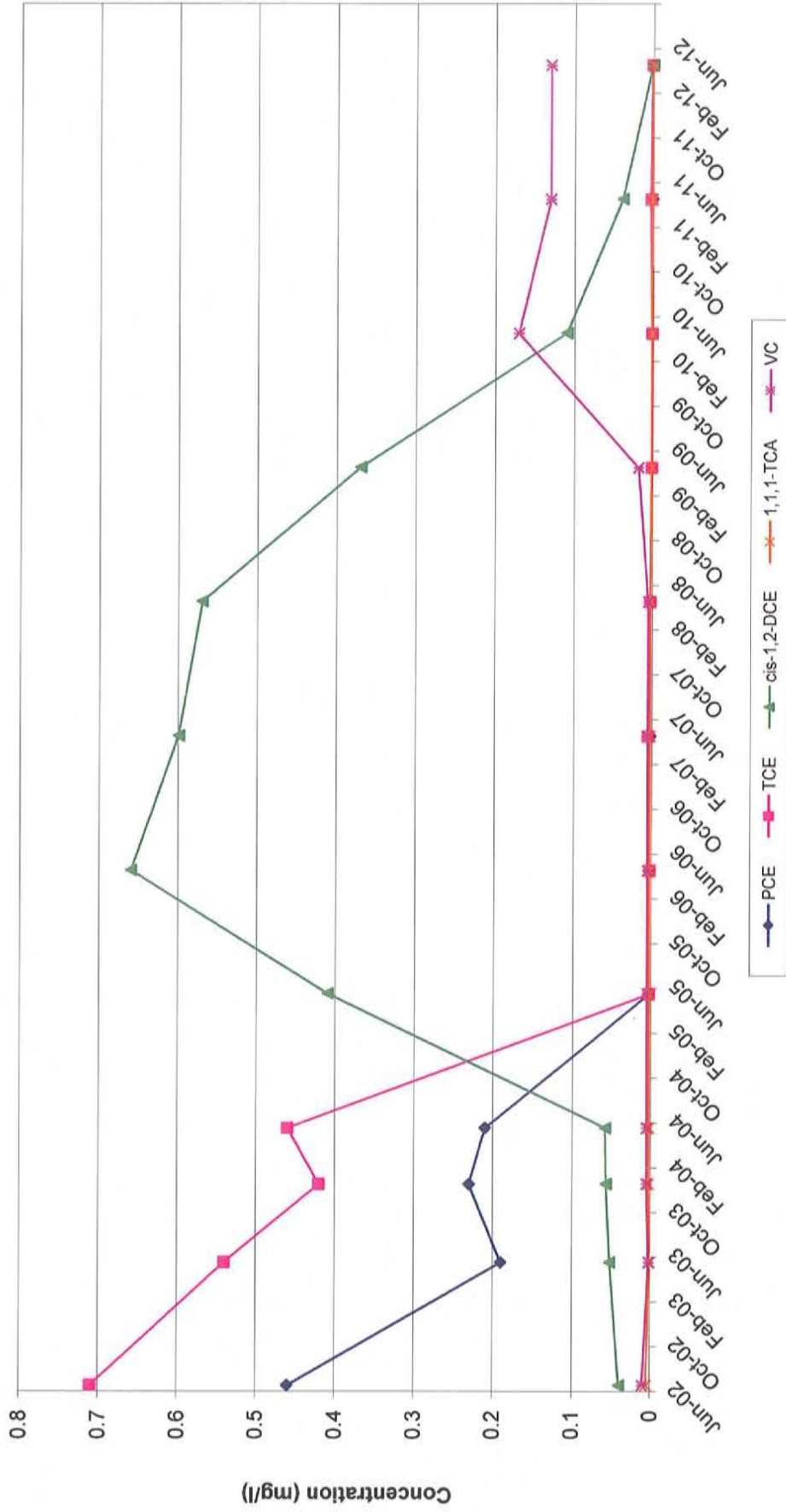
VOC Trends in Well OB-17-DO  
 Former Varian Facility Site  
 Beverly, Massachusetts



Notes: OB17-DO is a deep overburden well north of Route 128 on Commons Drive. See end of appendix for additional notes.

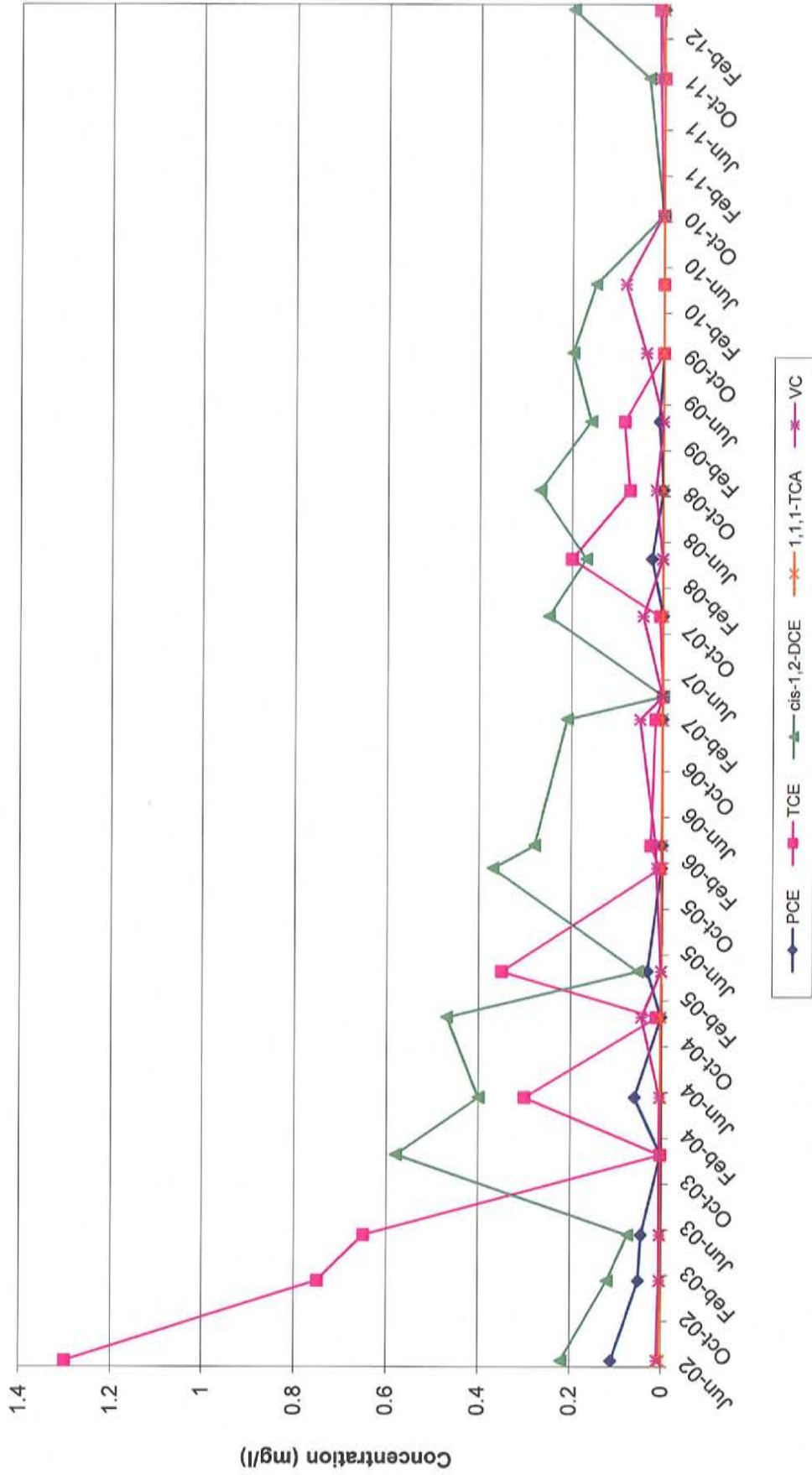


VOC Trends in Well OB-17-BR  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: OB17-BR is a bedrock well north of Route 128 on Commons Drive.  
See end of appendix for additional notes.

VOC Trends in Well CL02-BR  
Former Varian Facility Site  
Beverly, Massachusetts

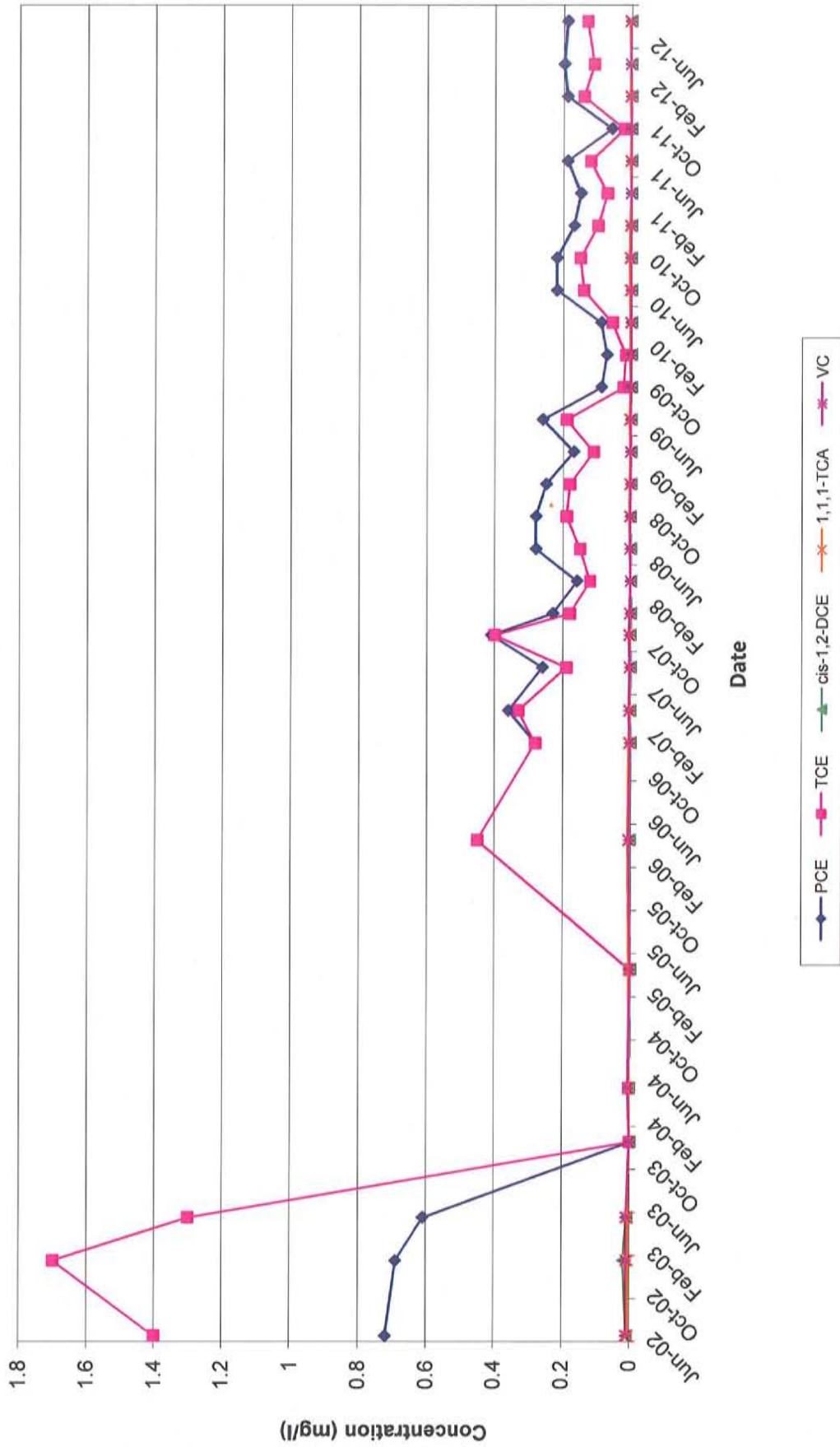


Notes: CL02-BR is a bedrock well north of Route 128 at 16 Tozer Road.  
See end of appendix for additional notes.

**BUILDING 3/6 TREATMENT AREA**

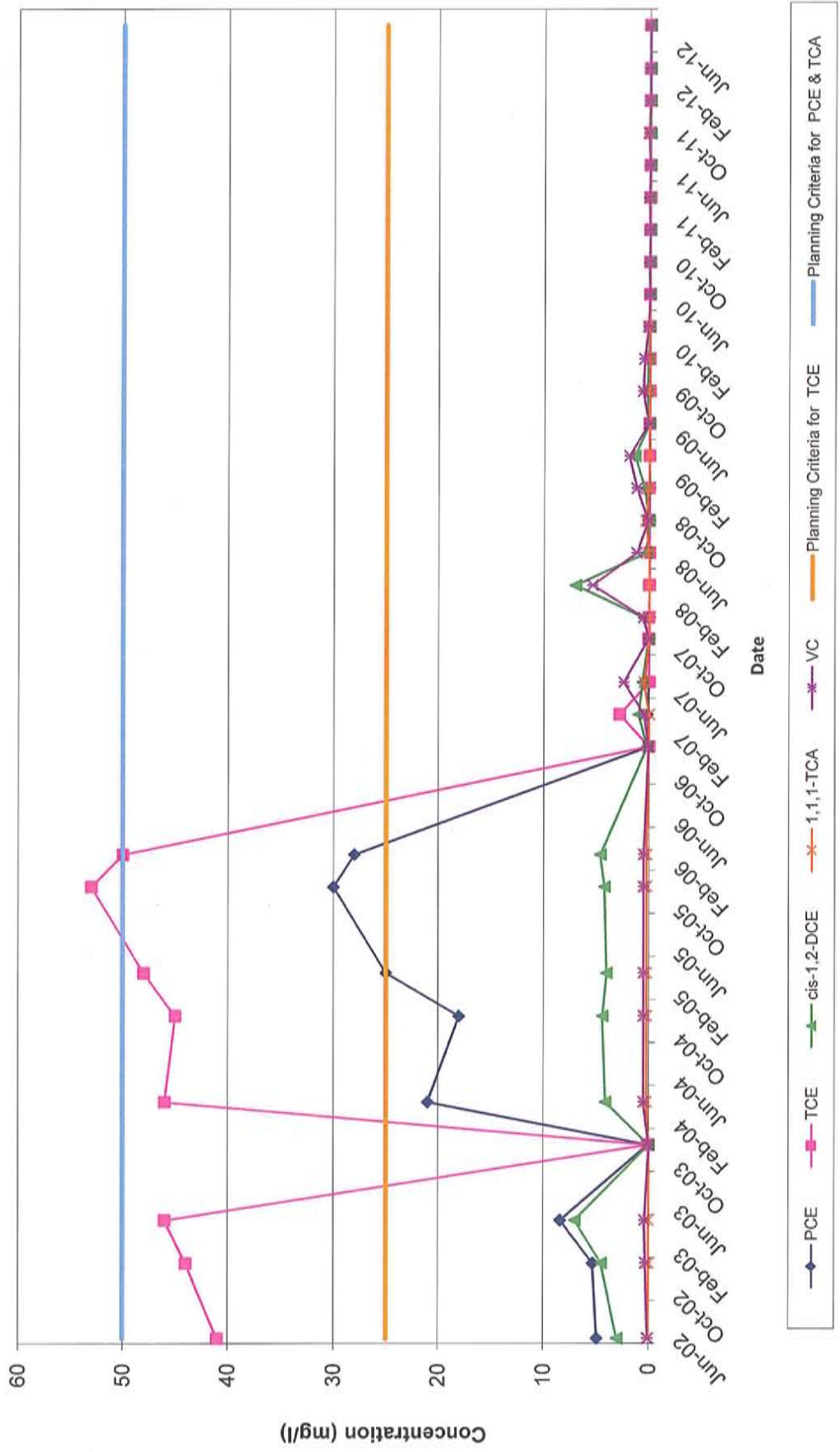


VOC Trends in Well OB-12-S  
Former Varian Facility Site  
Beverly, Massachusetts



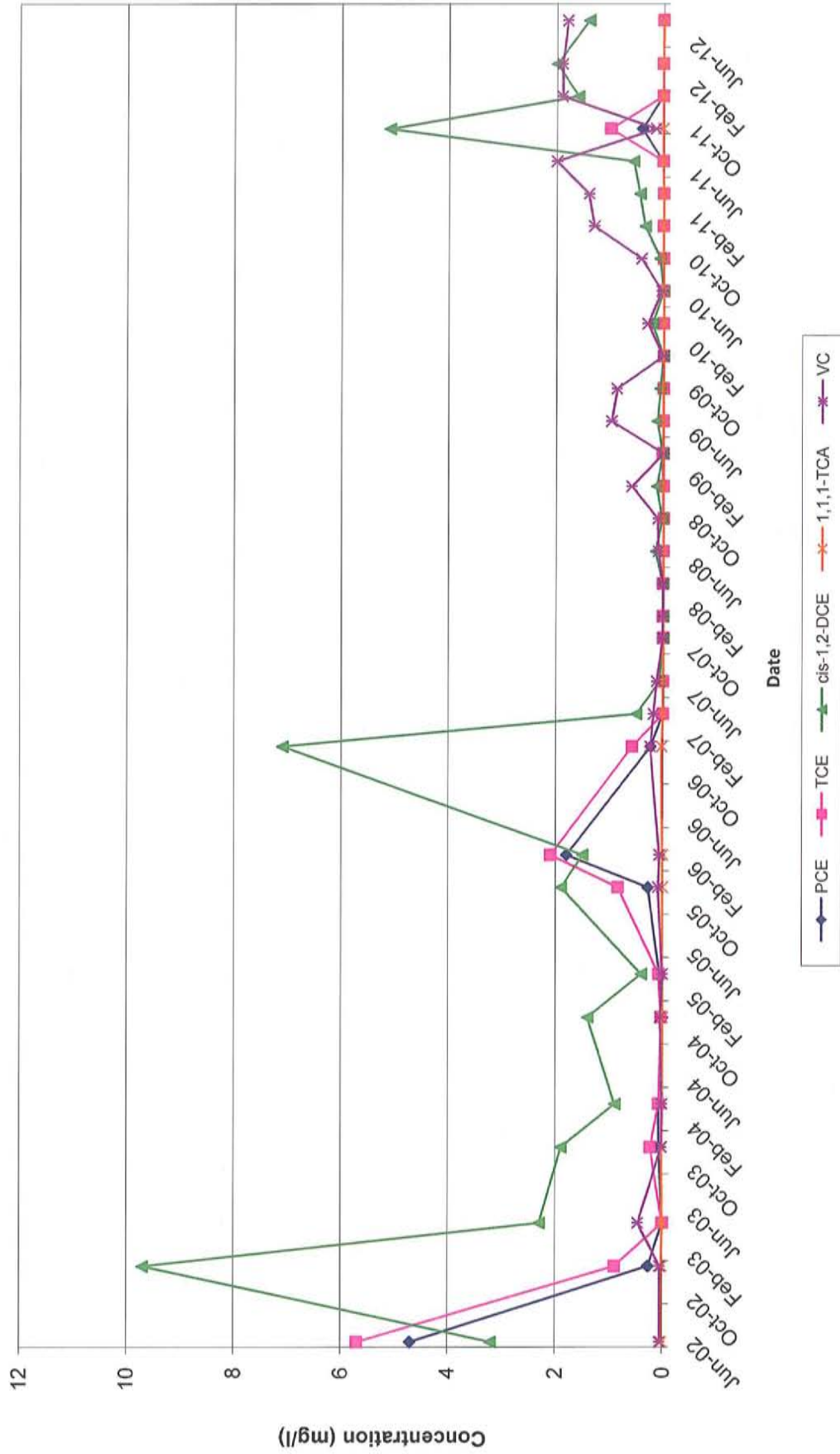
Note: OB-12-S is a shallow overburden well north of Building 3 where permanganate injection was completed in 2003. See end of appendix for additional notes.

VOC Trends in Well OB-09-S  
Former Varian Facility Site  
Beverly, Massachusetts



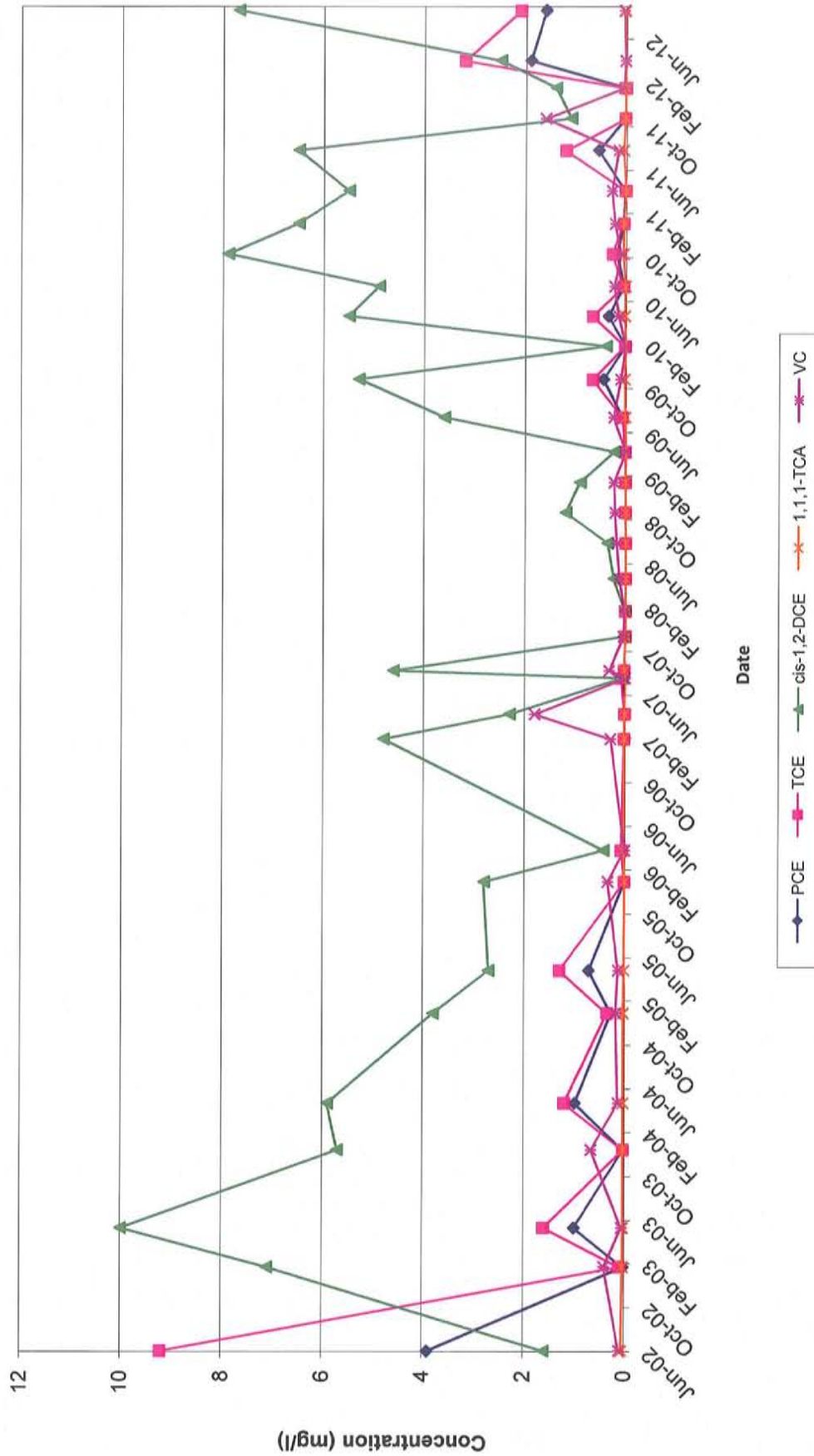
Note: OB-9-S is a shallow well east of Building 9. Bio-injection was completed from 2006 to 2012. See end of appendix for additional notes.

VOC Trends in Well OB-09-DO  
Former Varian Facility Site  
Beverly, Massachusetts



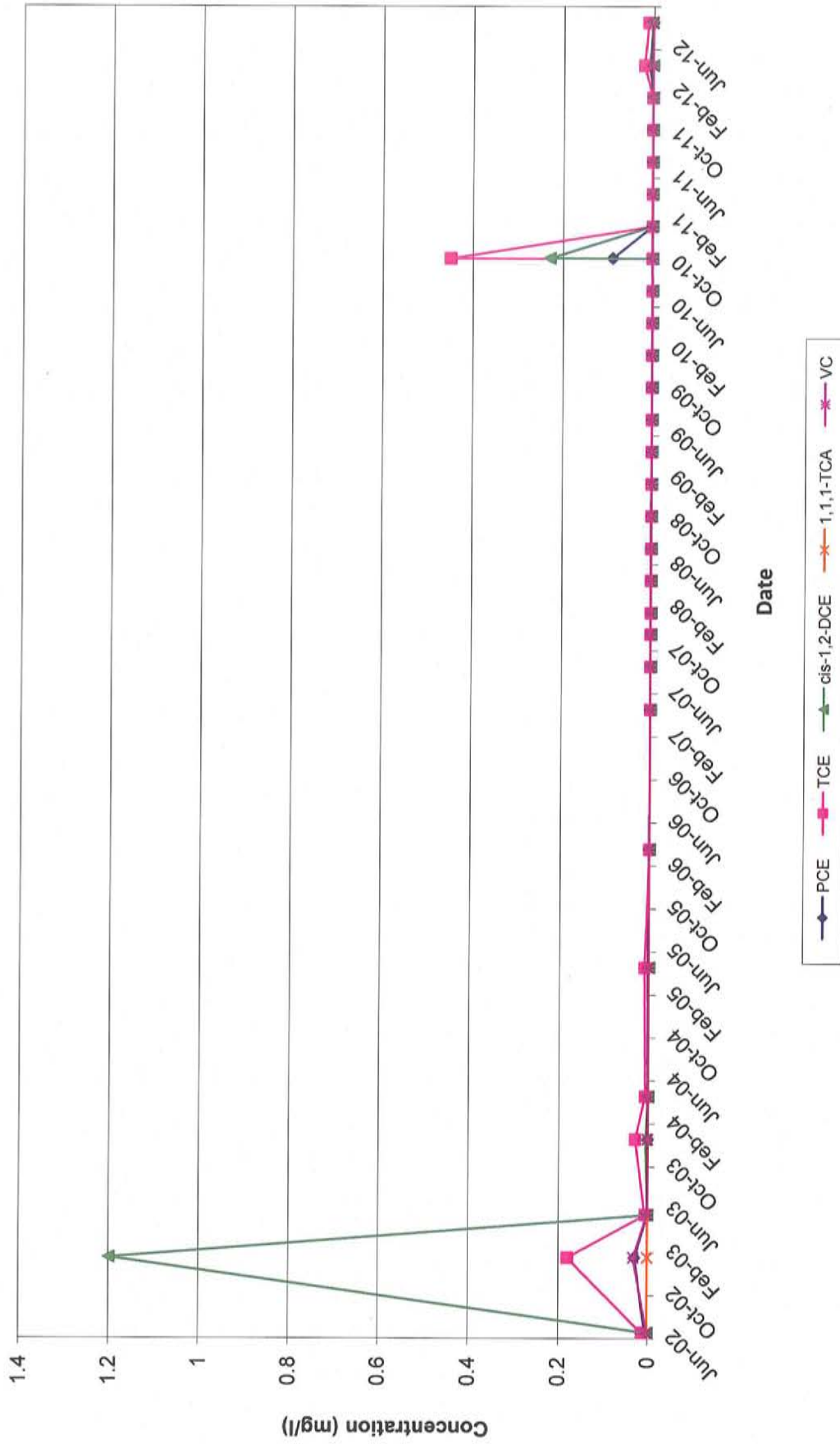
Note: OB-9-DO is a deep overburden well east of Building 9.  
See end of appendix for additional notes.

VOC Trends in Well OB-09-BR  
Former Varian Facility Site  
Beverly, Massachusetts



Note: OB-9-BR is a bedrock well east of Building 9.  
See end of appendix for additional notes.

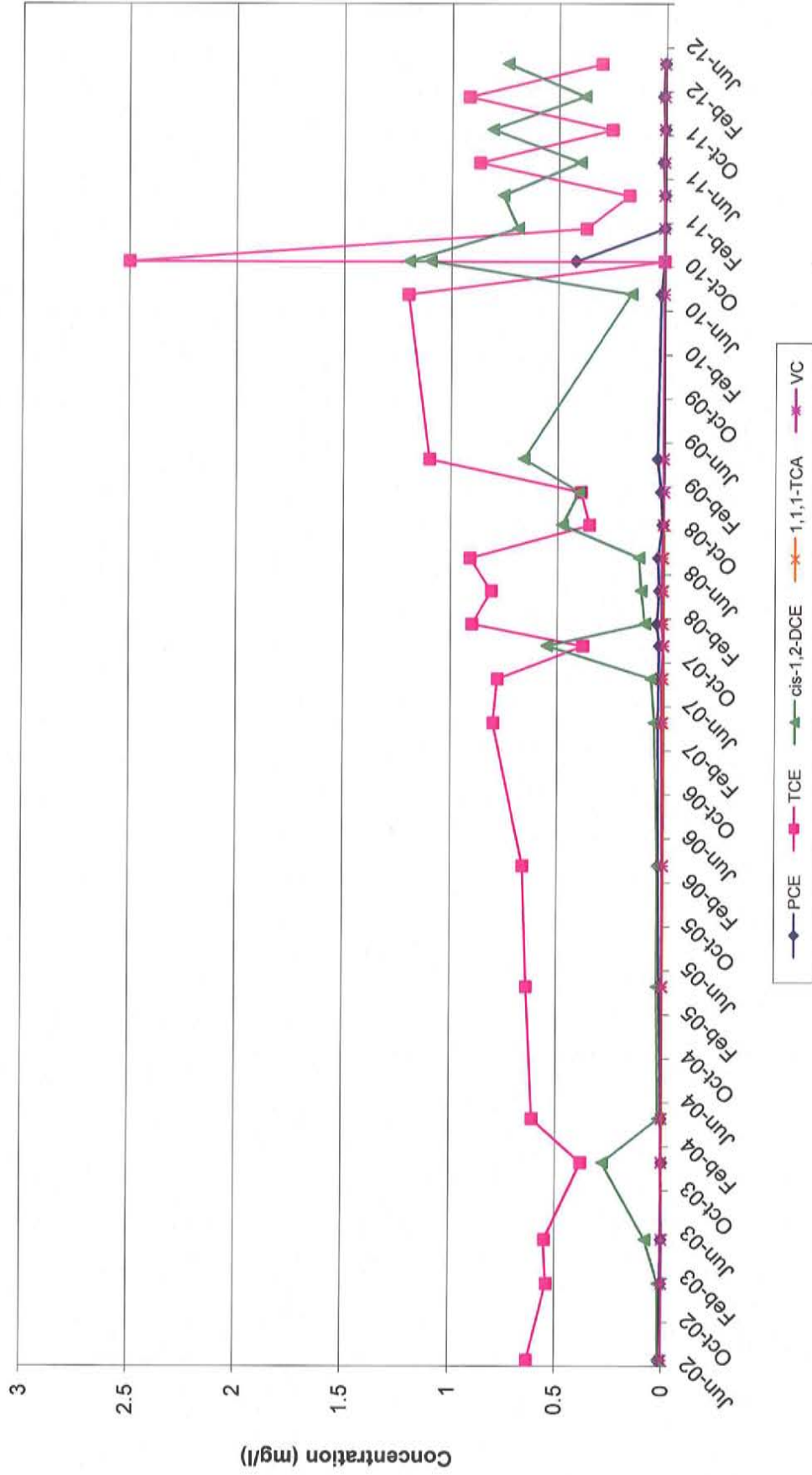
VOC Trends in Well OB-10-S  
Former Varian Facility Site  
Beverly, Massachusetts



Note: OB-10-S is a shallow well adjacent to Building 4.  
See end of appendix for additional notes.

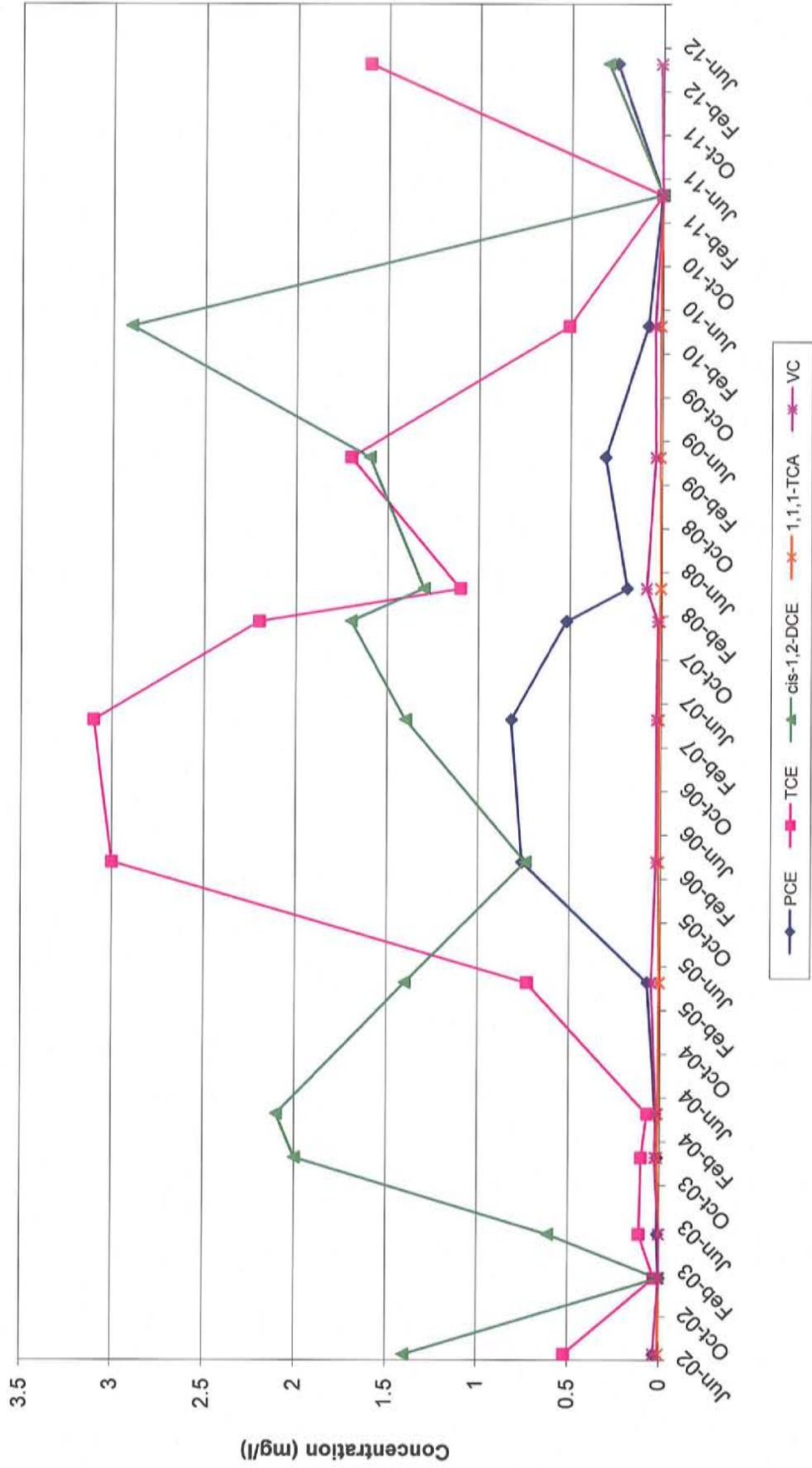


VOC Trends in Well OB-10-DO  
Former Varian Facility Site  
Beverly, Massachusetts



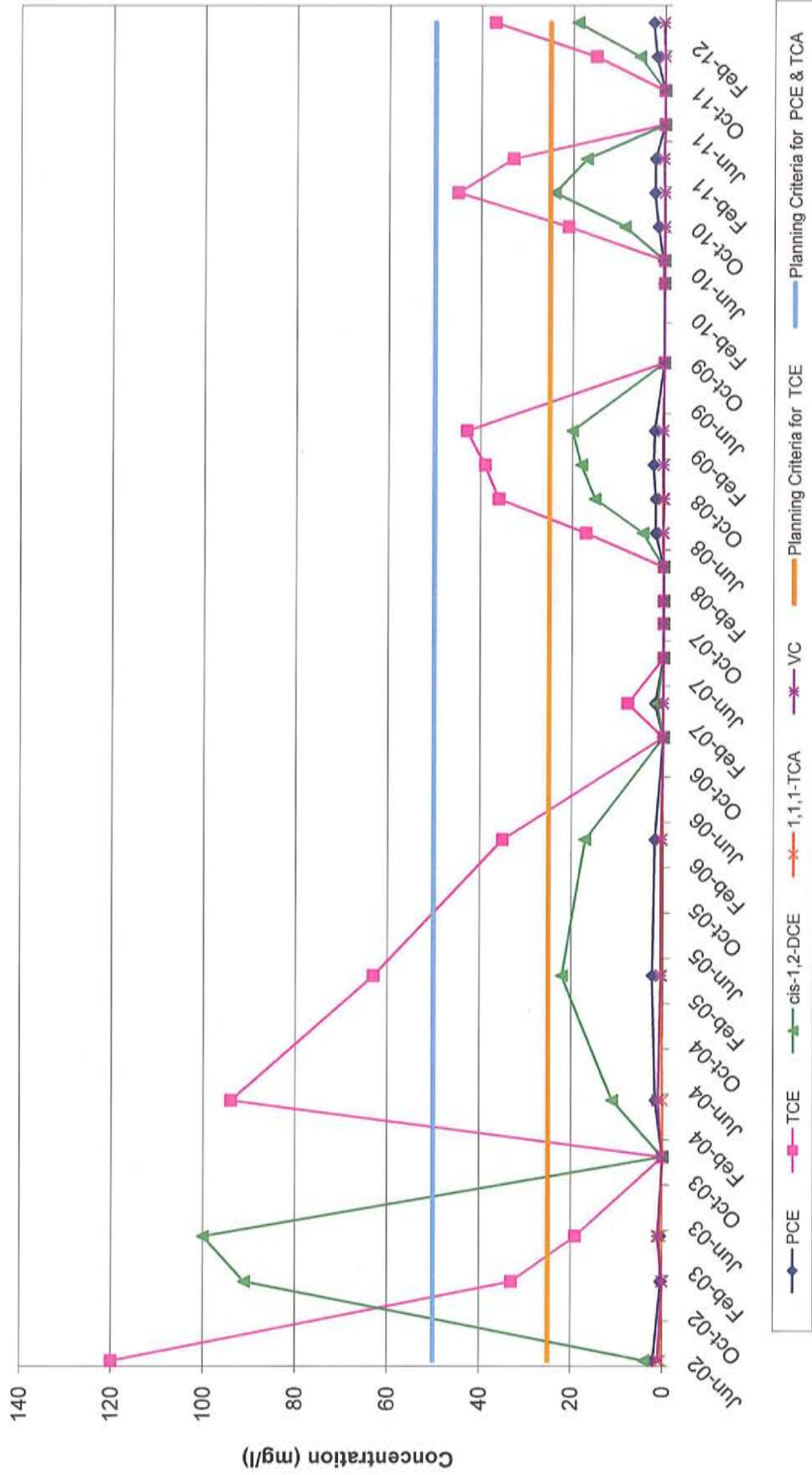
Note: OB-10-DO is a deep overburden well adjacent to Building 4.  
See end of appendix for additional notes.

VOC Trends in Well OB-10-BR  
Former Varian Facility Site  
Beverly, Massachusetts



Note: OB-10-BR is a bedrock well adjacent to Building 4 where permanganate injection was completed in 2010. See end of appendix for additional notes.

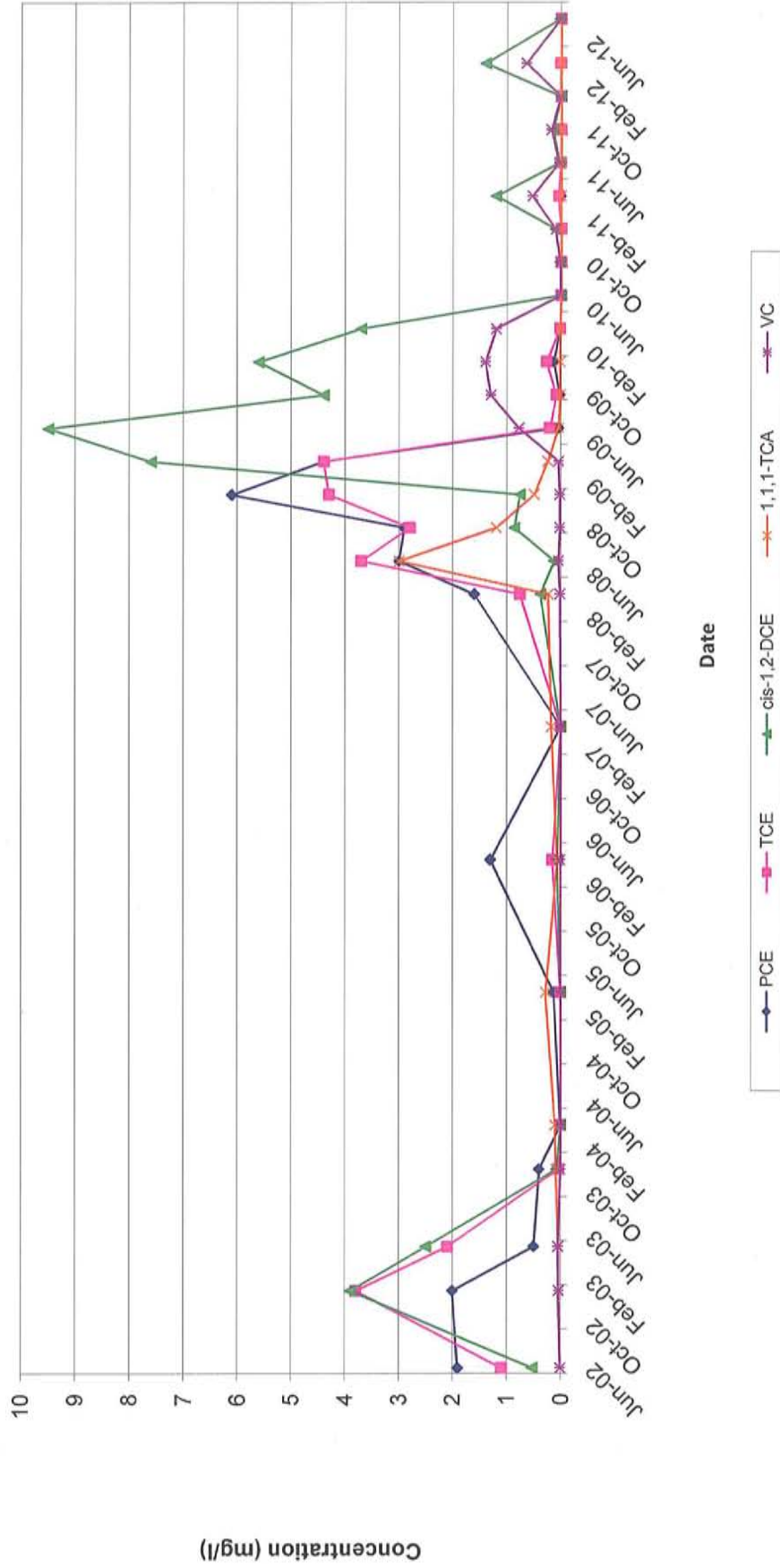
VOC Trends in Well OB-12-DO  
 Former Varian Facility Site  
 Beverly, Massachusetts



Note: OB-12-DO is a deep overburden well north of Building 3. Permanganate injection completed 2003-2007, 2009, 2011 and 2012. See end of appendix for additional notes.

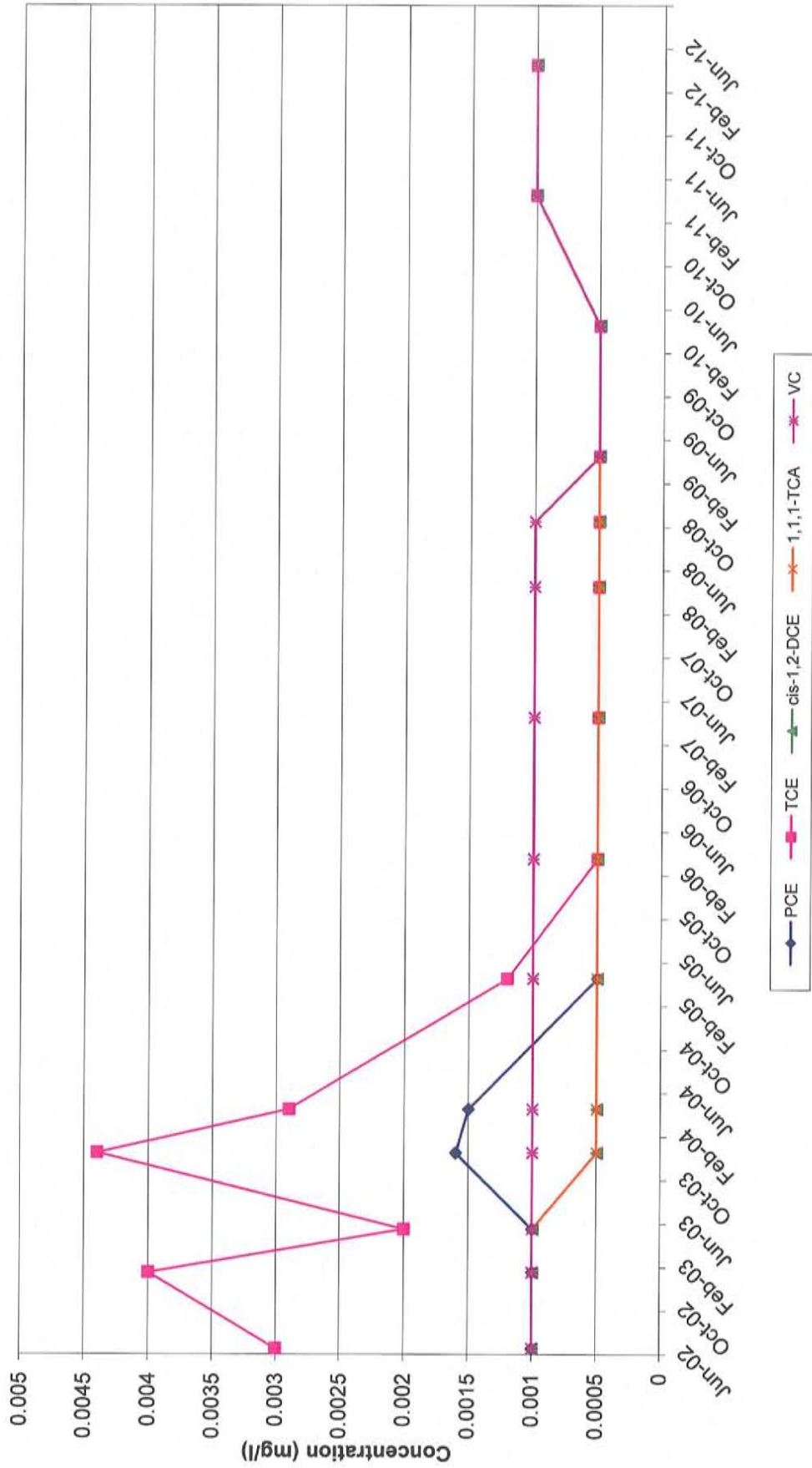


VOC Trends in Well OB-15-S  
Former Varian Facility Site  
Beverly, Massachusetts



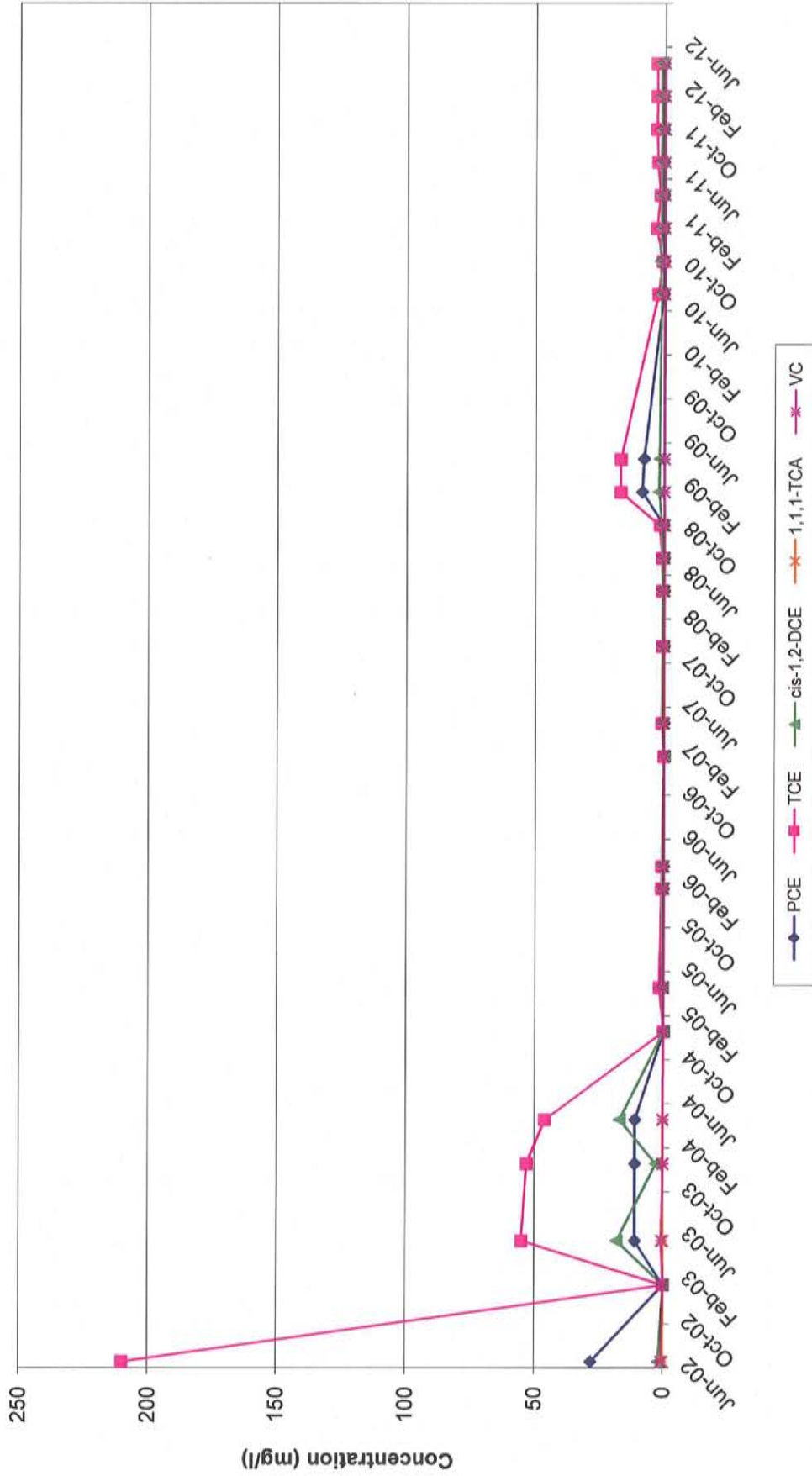
Notes: OB15-S is a shallow well northeast of Building 9. Bio-injection was conducted in 2009, 2010, and 2012. See end of appendix for additional notes.

VOC Trends in Well OB-19-S  
Former Varian Facility Site  
Beverly, Massachusetts



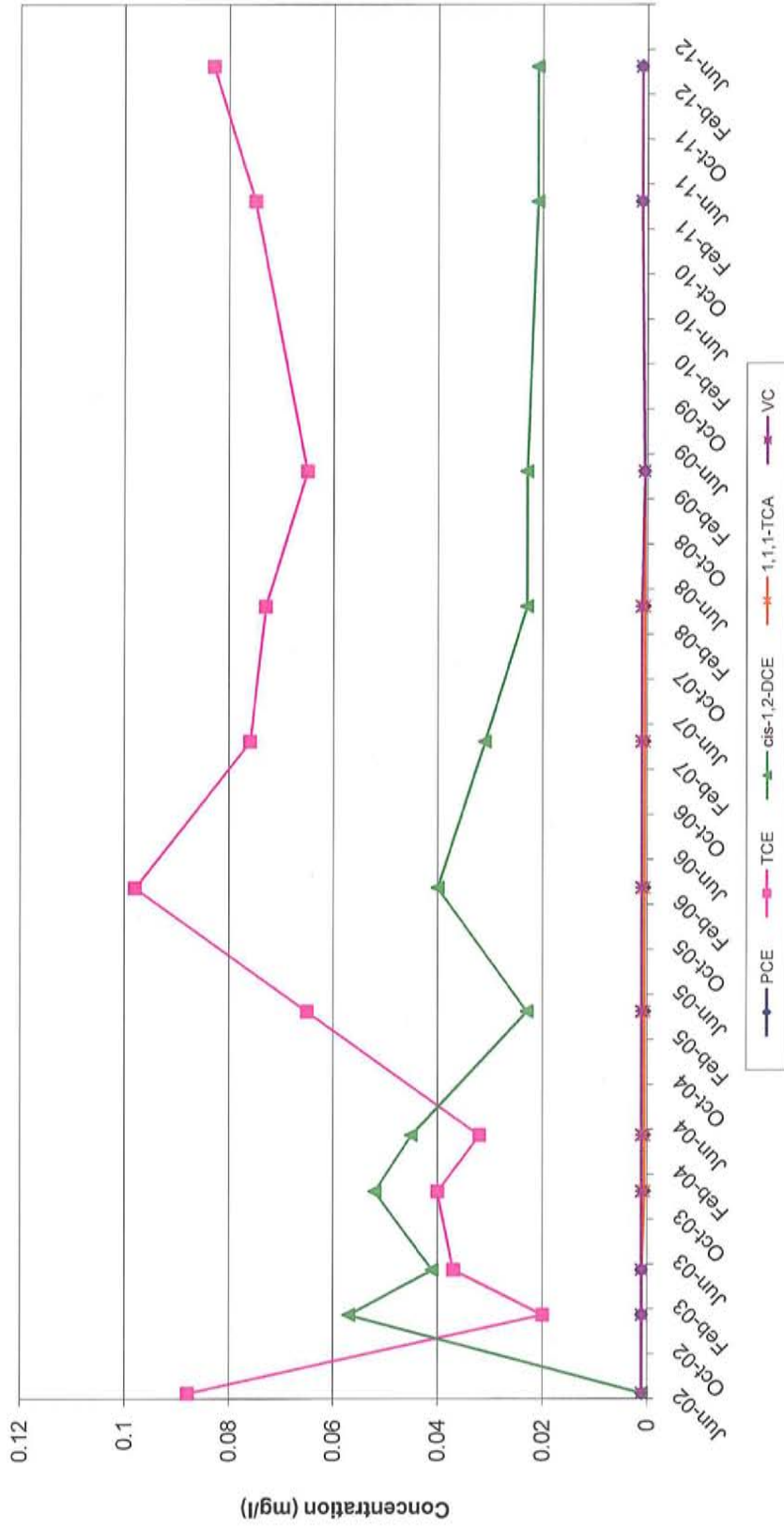
Note: OB-19-S is a shallow well west of Building 2.  
See end of appendix for additional notes.

VOC Trends in Well OB-19-DO  
 Former Varian Facility Site  
 Beverly, Massachusetts



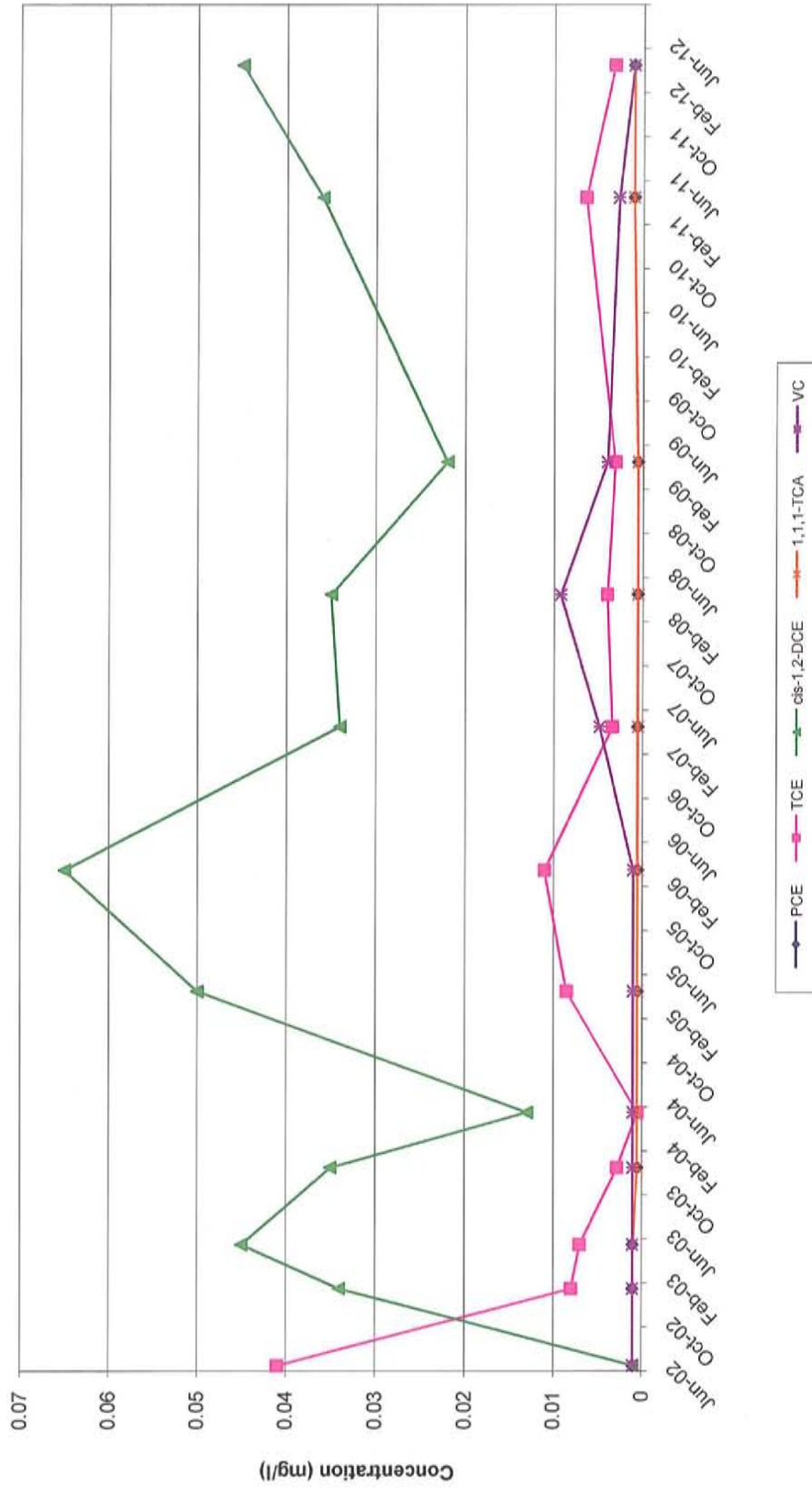
Note: OB-19-DO is a deep overburden well west of Building 2 where permanganate injection was conducted from 2002-2005. See end of appendix for additional notes.

VOC Trends in Well OB-11-DO  
 Former Varian Facility Site  
 Beverly, Massachusetts



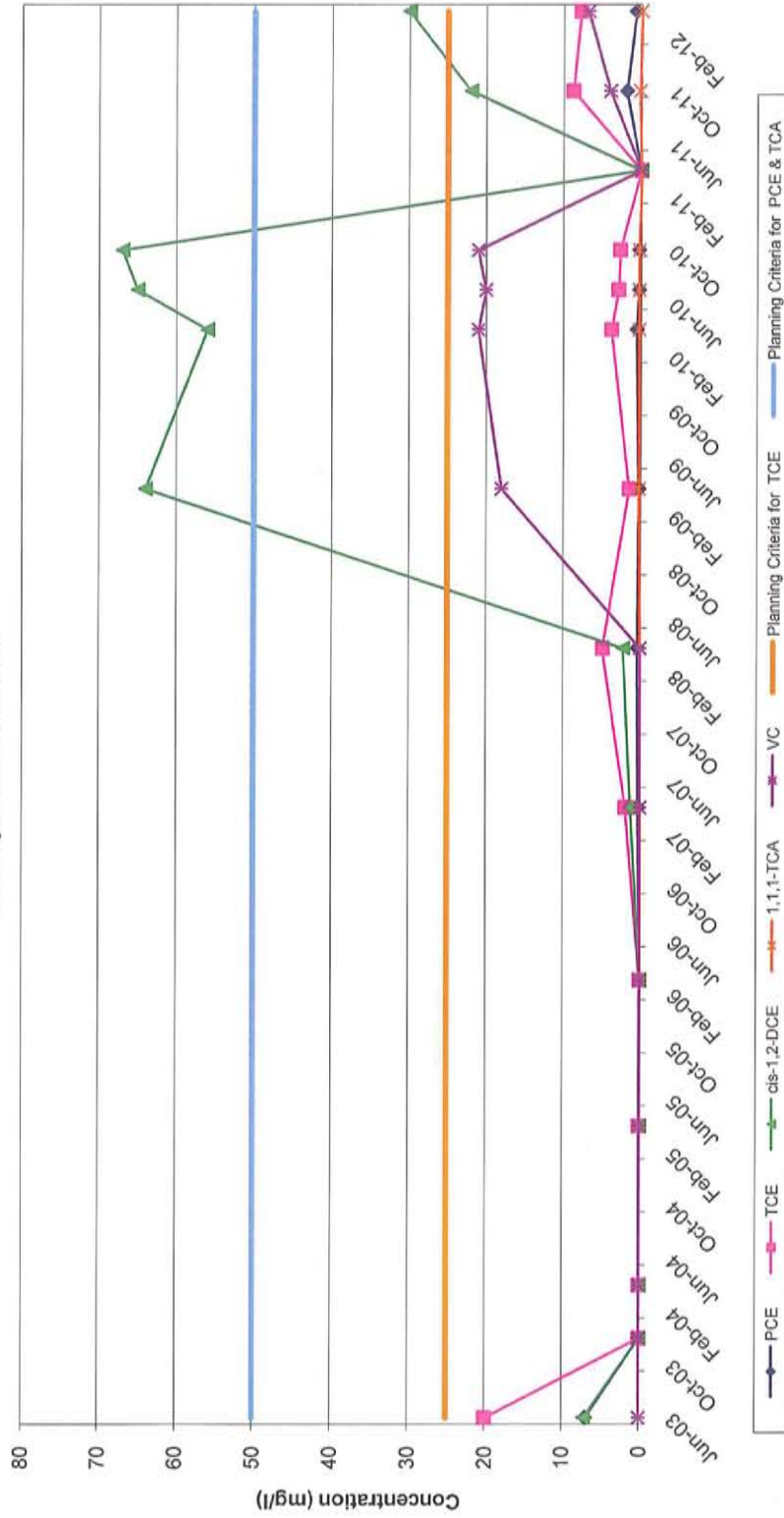
Notes: OB11-DO is a deep overburden well located north of Building 1.  
 See end of appendix for additional notes.

VOC Trends in Well OB-11-BR  
 Former Varian Facility Site  
 Beverly, Massachusetts



Notes: OB11-BR is a bedrock well located north of Building 3.  
 See end of appendix for additional notes.

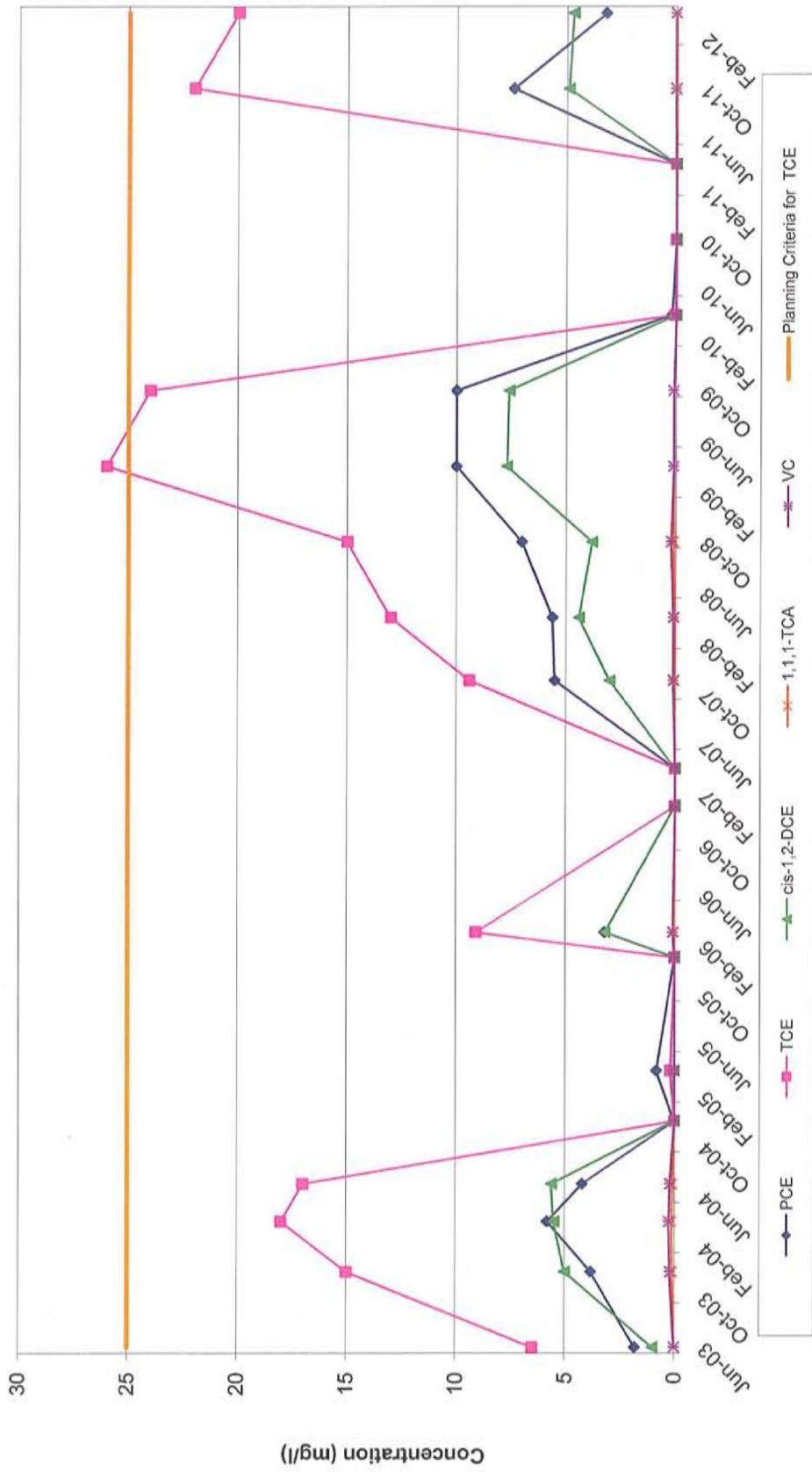
VOC Trends in Well OB-25-BR  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: OB-25-BR is a bedrock well located just west of Building 1 where permanganate injection was conducted in 2003, 2010, and 2012. See end of appendix for additional notes.

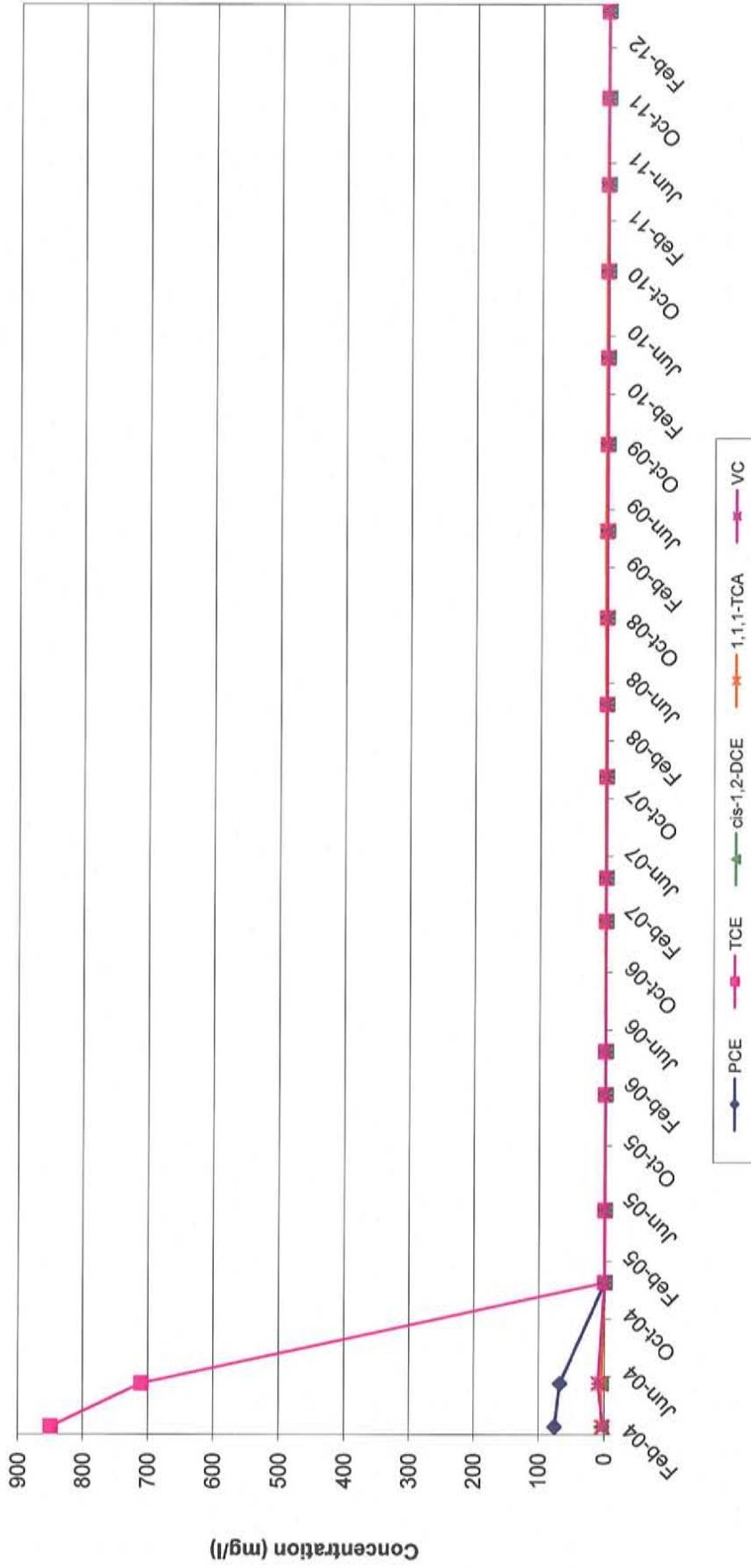


VOC Trends in Well OB-27-BR  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: OB-27-BR is a bedrock well located west of Building 7.  
Permanganate injection conducted in 2004-2007 and in 2010-2012.  
See end of appendix for additional notes.

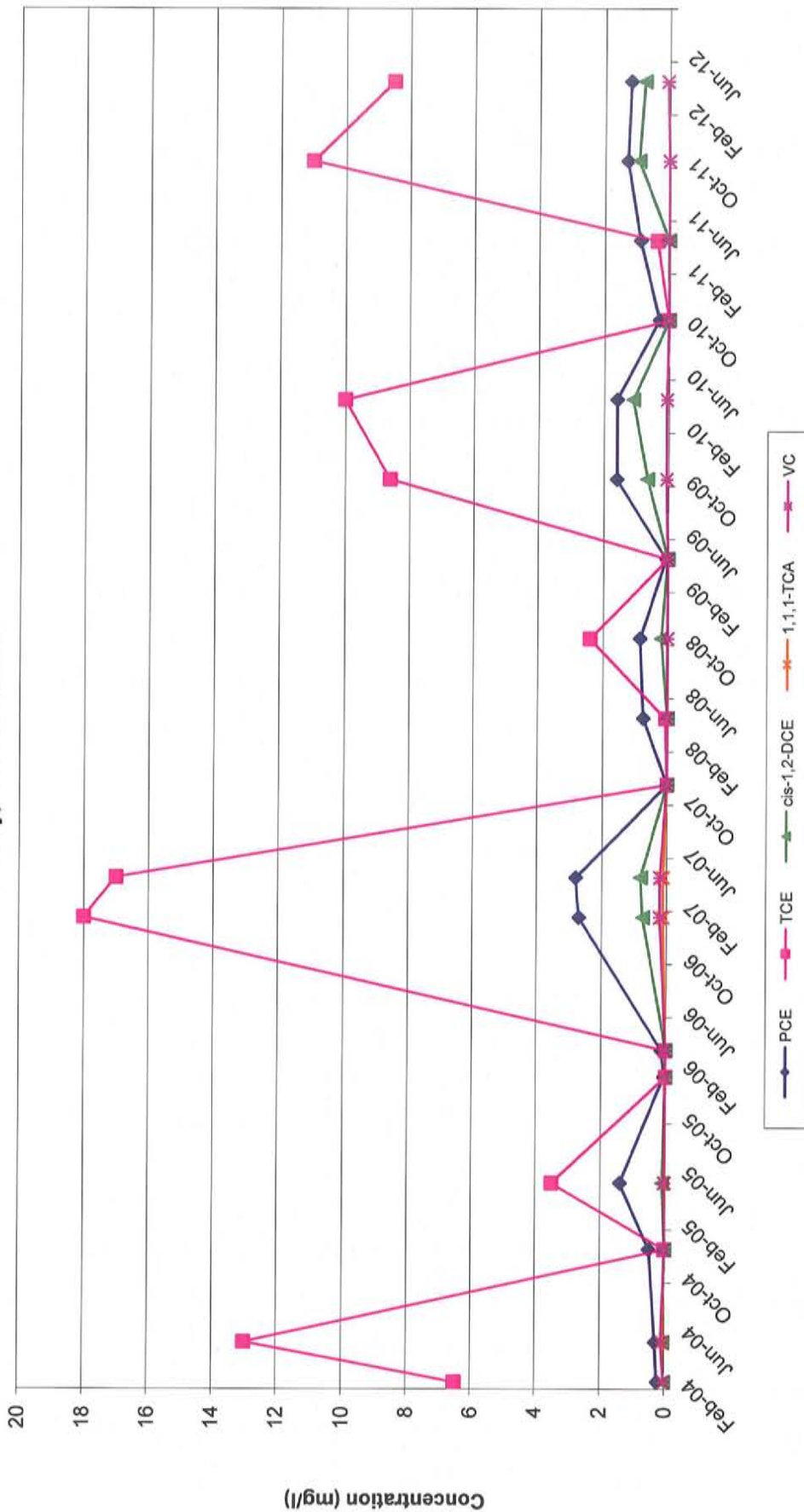
VOC Trends in Well OB-32-DO  
Former Varian Facility Site  
Beverly, Massachusetts



Note: OB-32-DO is a deep overburden well north of Building 3 where permanganate injection was conducted in 2004. See end of appendix for additional notes.

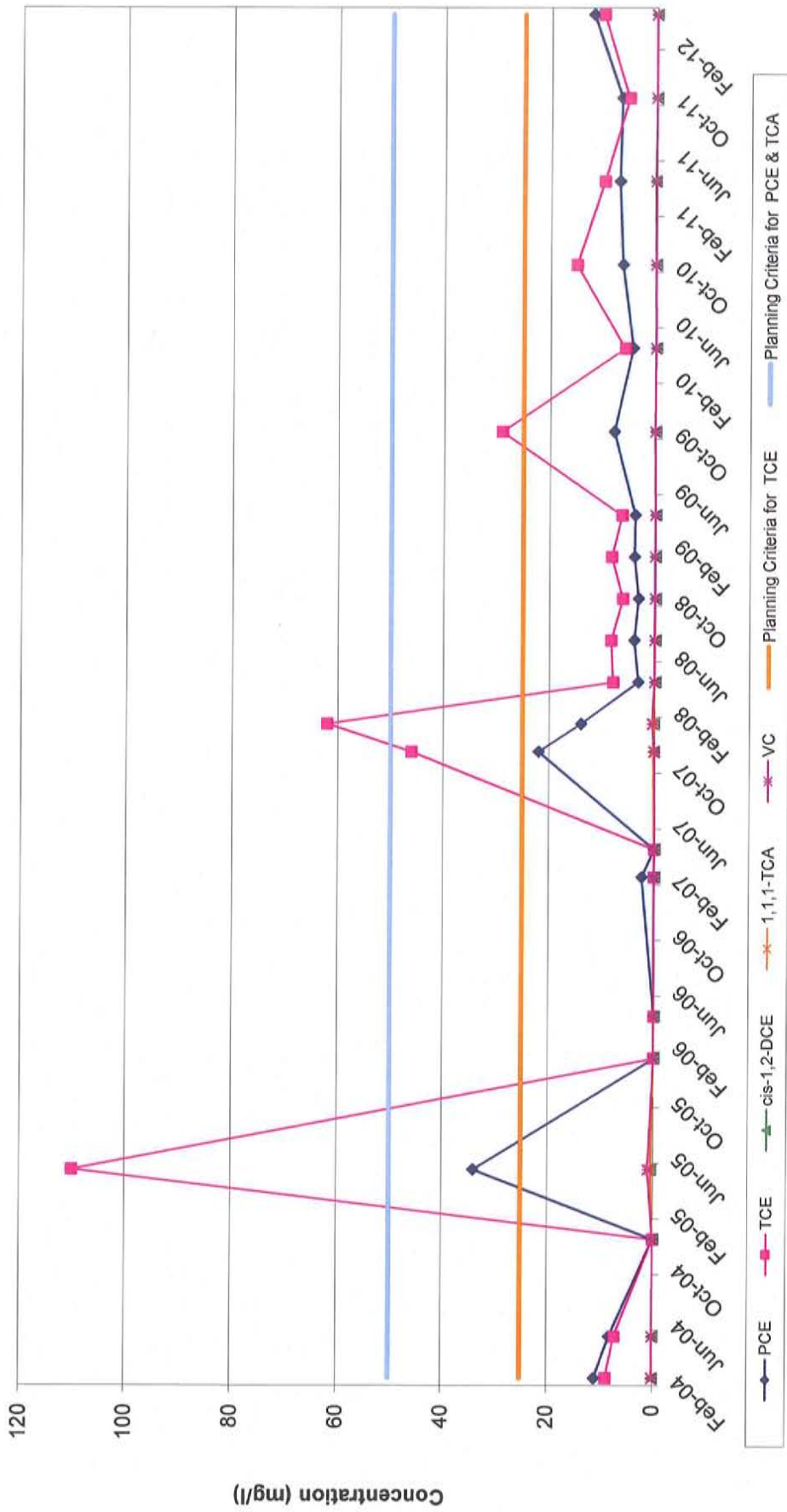


VOC Trends in Well OB-34-DO  
Former Varian Facility Site  
Beverly, Massachusetts



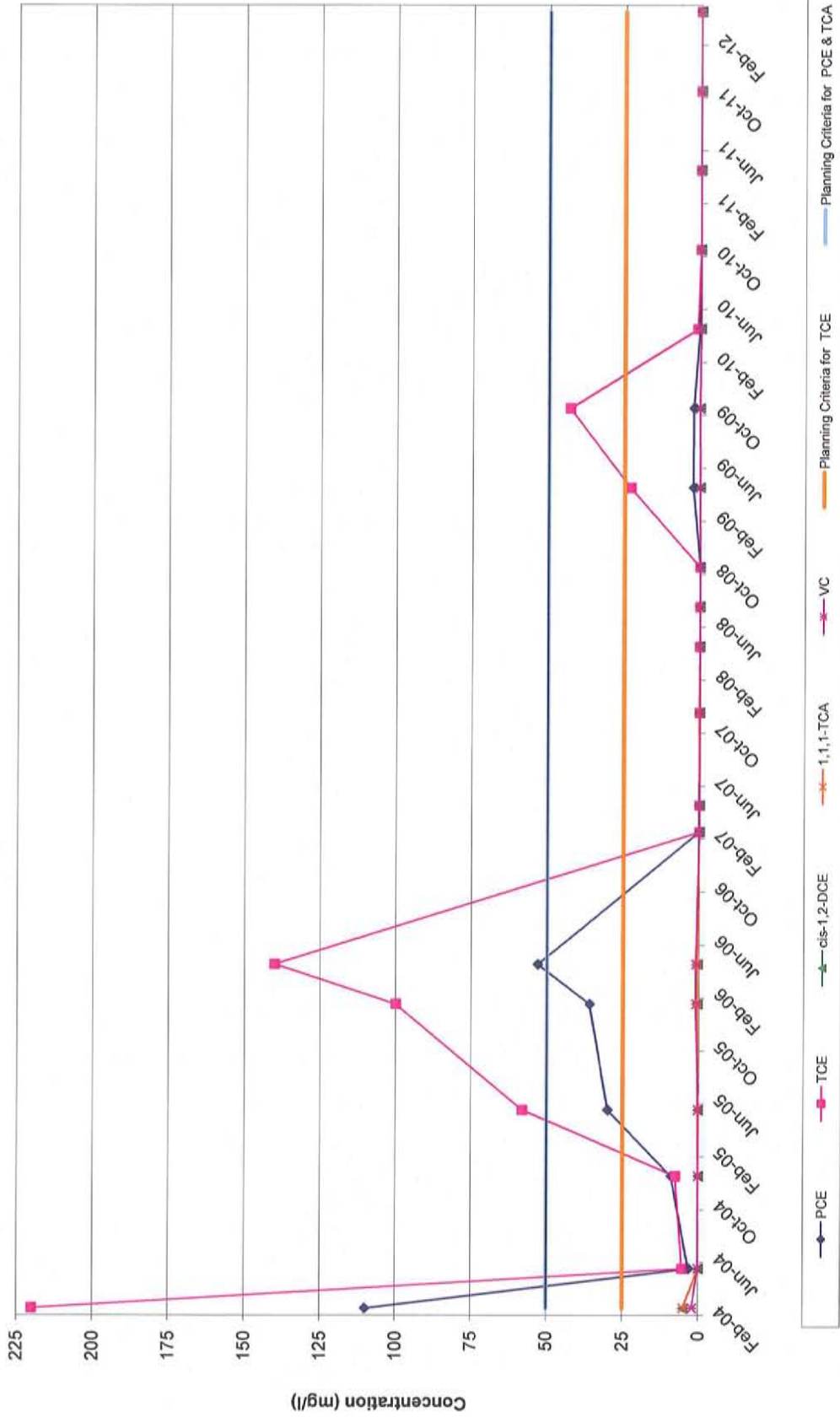
Notes: OB34-DO is a deep overburden well north of Building 3. Permanganate injection was conducted in 2004, 2005, 2007 and 2009. See end of appendix for additional notes.

VOC Trends in Well OB-36-DO  
Former Varian Facility Site  
Beverly, Massachusetts



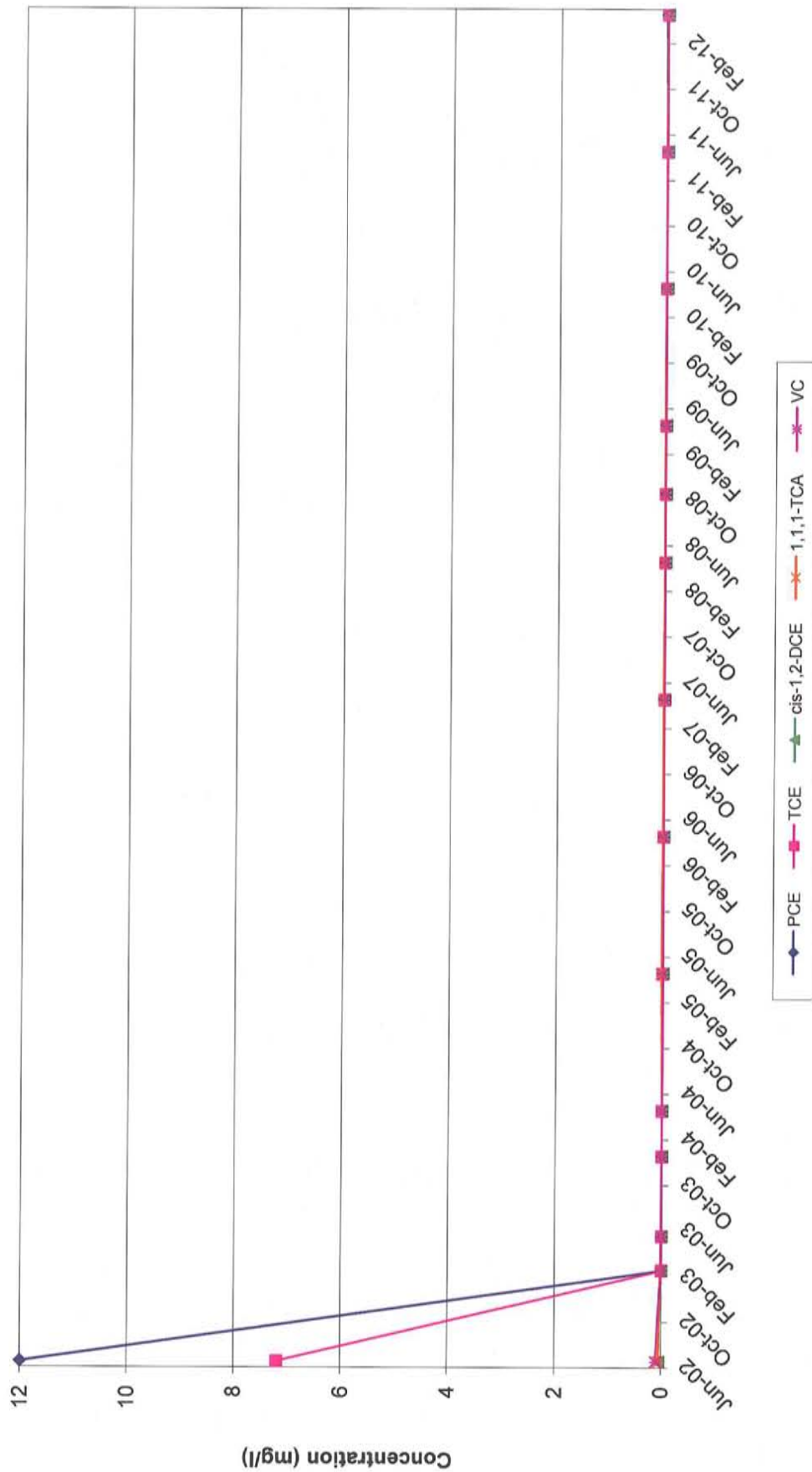
Note: OB-36-DO is a deep overburden well inside the Building 6 loading dock where permanganate injection was conducted in 2004-2005. See end of appendix for additional notes.

VOC Trends in Well OB-37-DO  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: OB37-DO is a deep overburden well inside Building 6. Permanganate injection conducted in 2006, 2007 and 2010-2011. See end of appendix for additional notes.

VOC Trends in Well AP-12-S  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: AP-12-S is a shallow well adjacent to Building 6 where permanganate injection has been completed in 2002 and 2003. See end of appendix for additional notes.

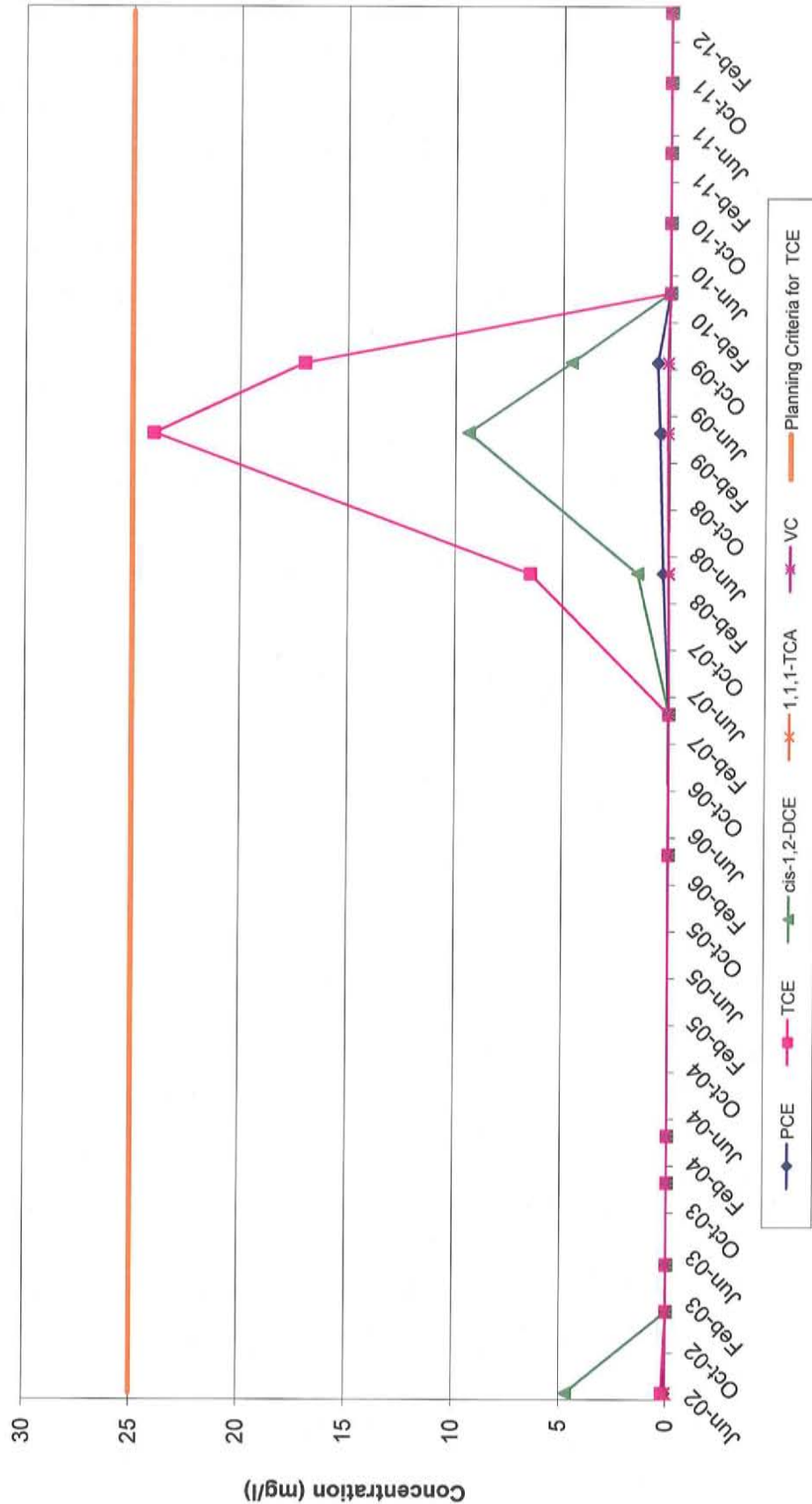
VOC Trends in Well AP-12-DO  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: AP-12-DO is a deep overburden well adjacent to Building 6 where permanganate injection was conducted in 2002, 2003, 2004, and 2012. See end of appendix for additional notes.

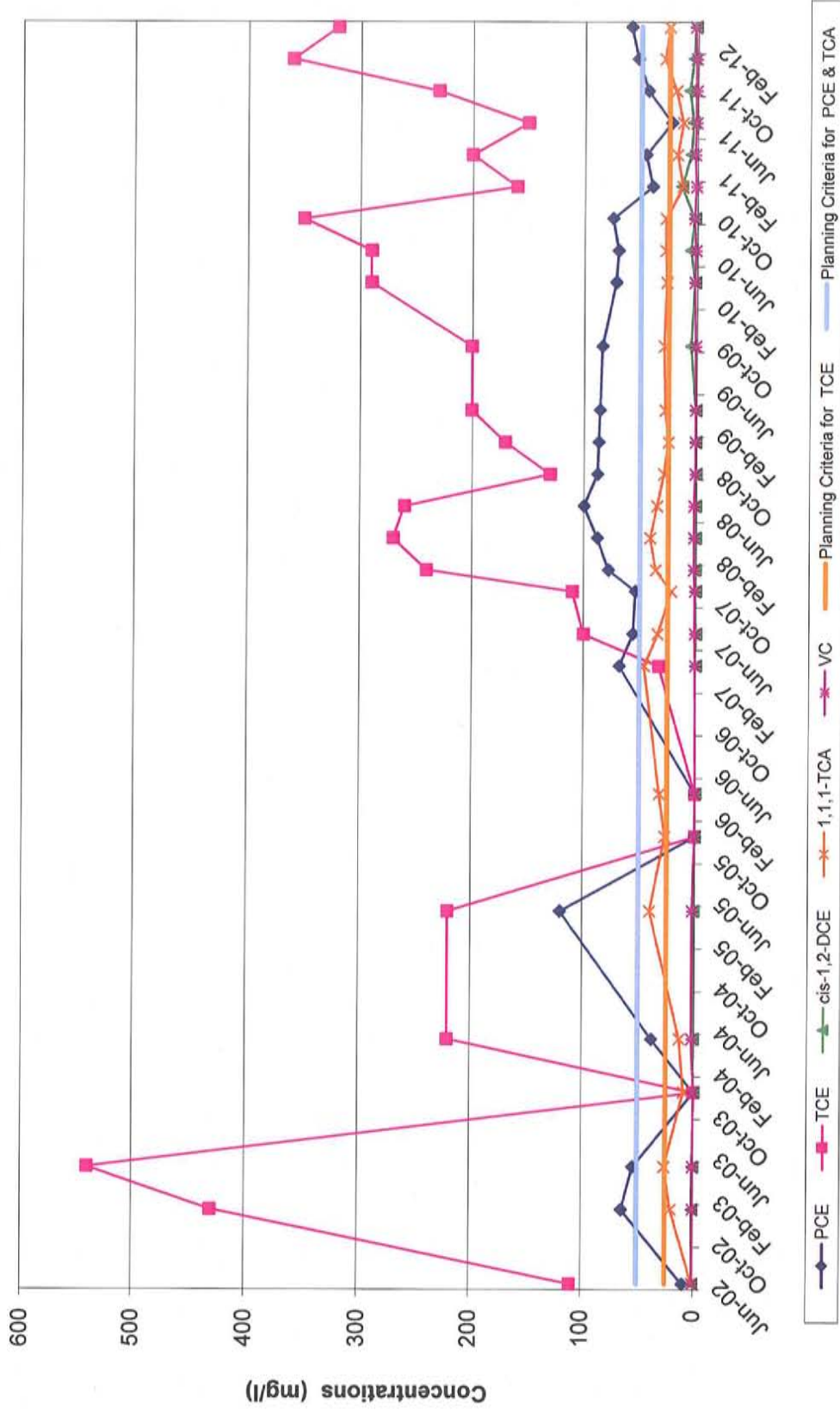


VOC Trends in Well AP-12-BR  
Former Varian Facility Site  
Beverly, Massachusetts



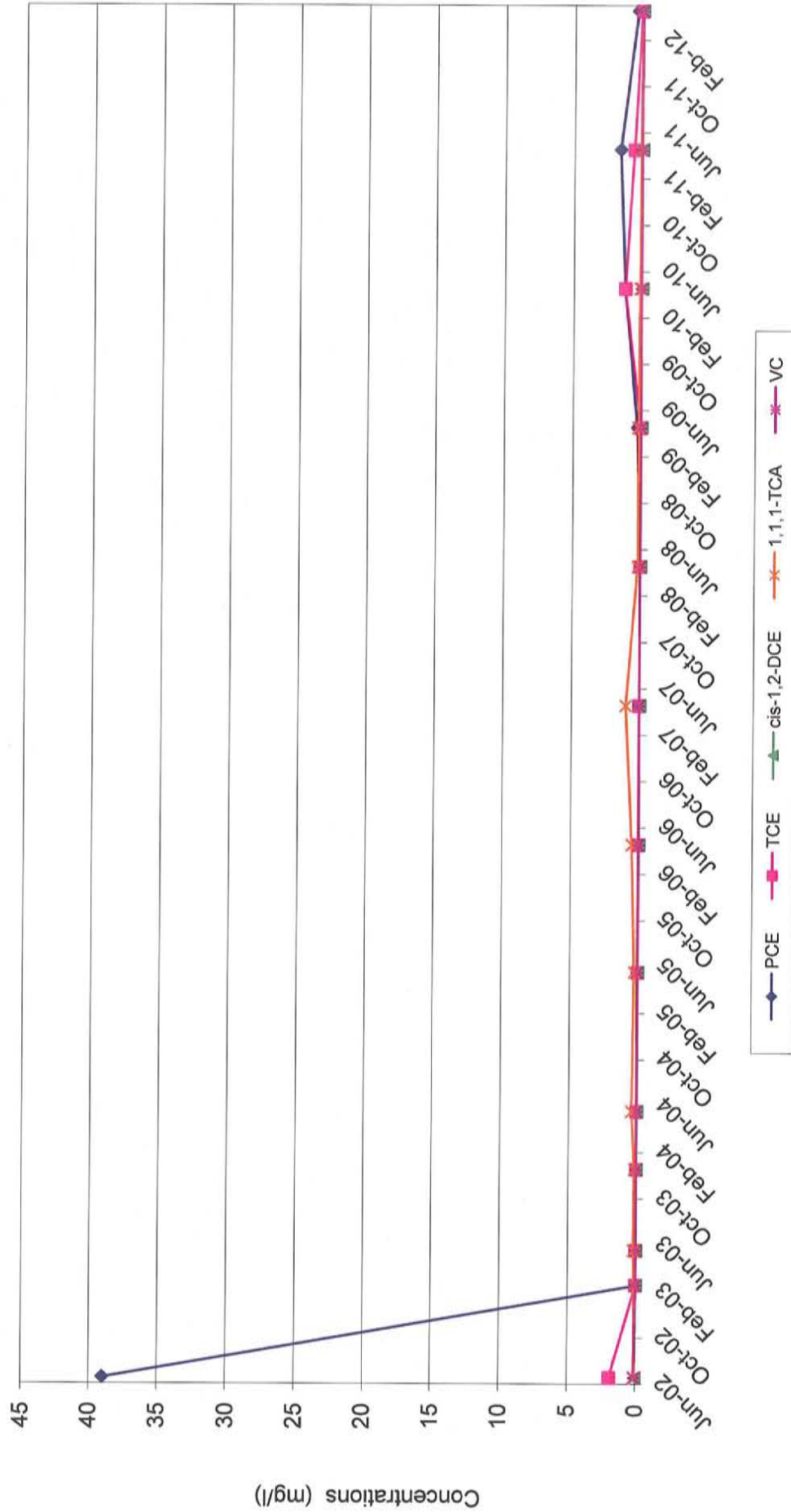
Notes: AP-12-DO is a deep overburden well adjacent to Building 6. Permanganate injection conducted in 2002, 2003, 2004 and 2010. See end of appendix for additional notes.

VOC Trends in Well AP-13-DO  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: AP-13-DO is a deep overburden well adjacent to Building 3 where permanganate injection was conducted in 2002-2005 and bio-injection occurred in 2007-2008 and 2010-2011. See end of appendix for additional notes.

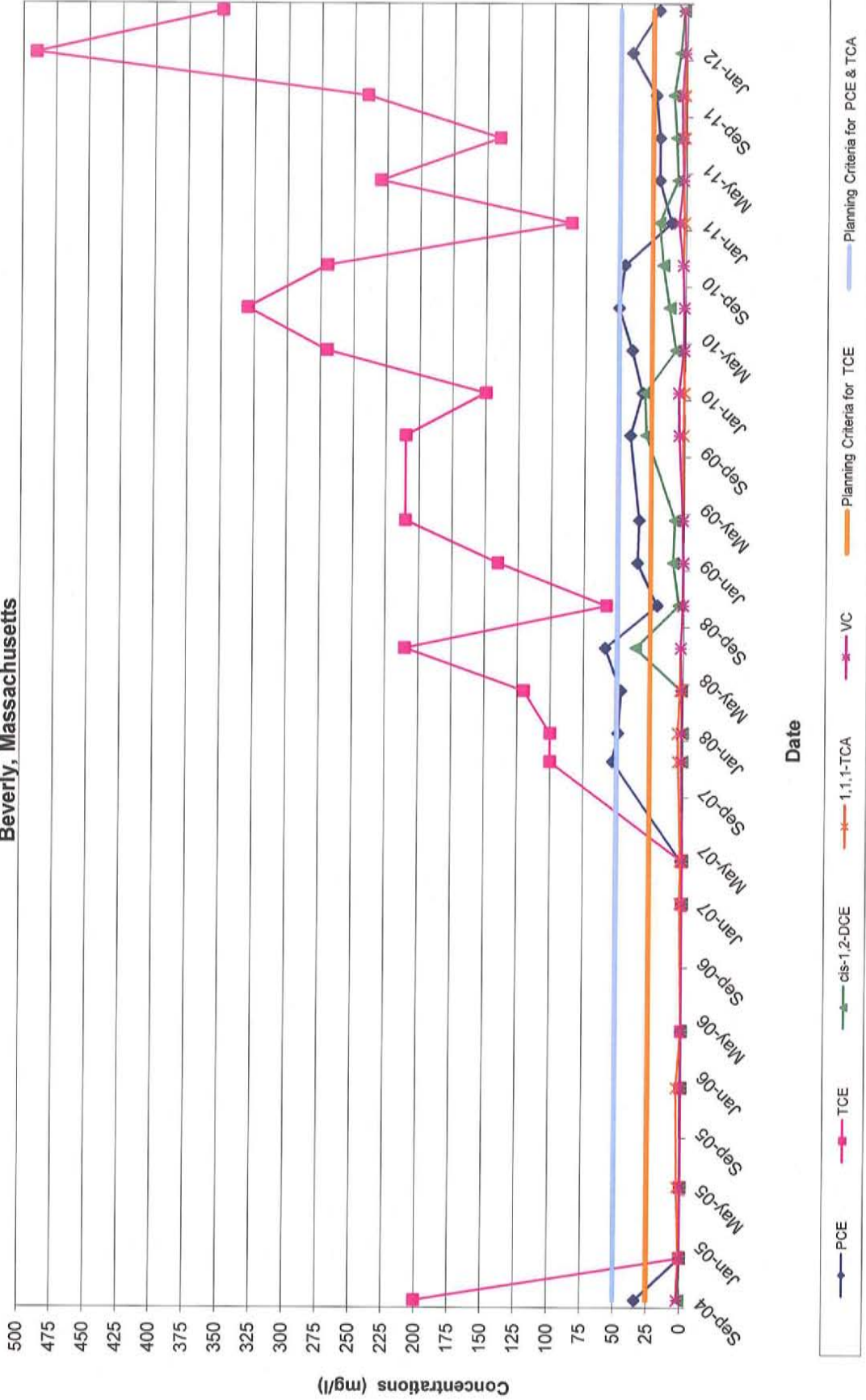
VOC Trends in Well AP-14S  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: AP-14S is a shallow overburden well adjacent to (north of) Building 3 where permanganate injection was conducted in 2002. See end of appendix for additional notes.

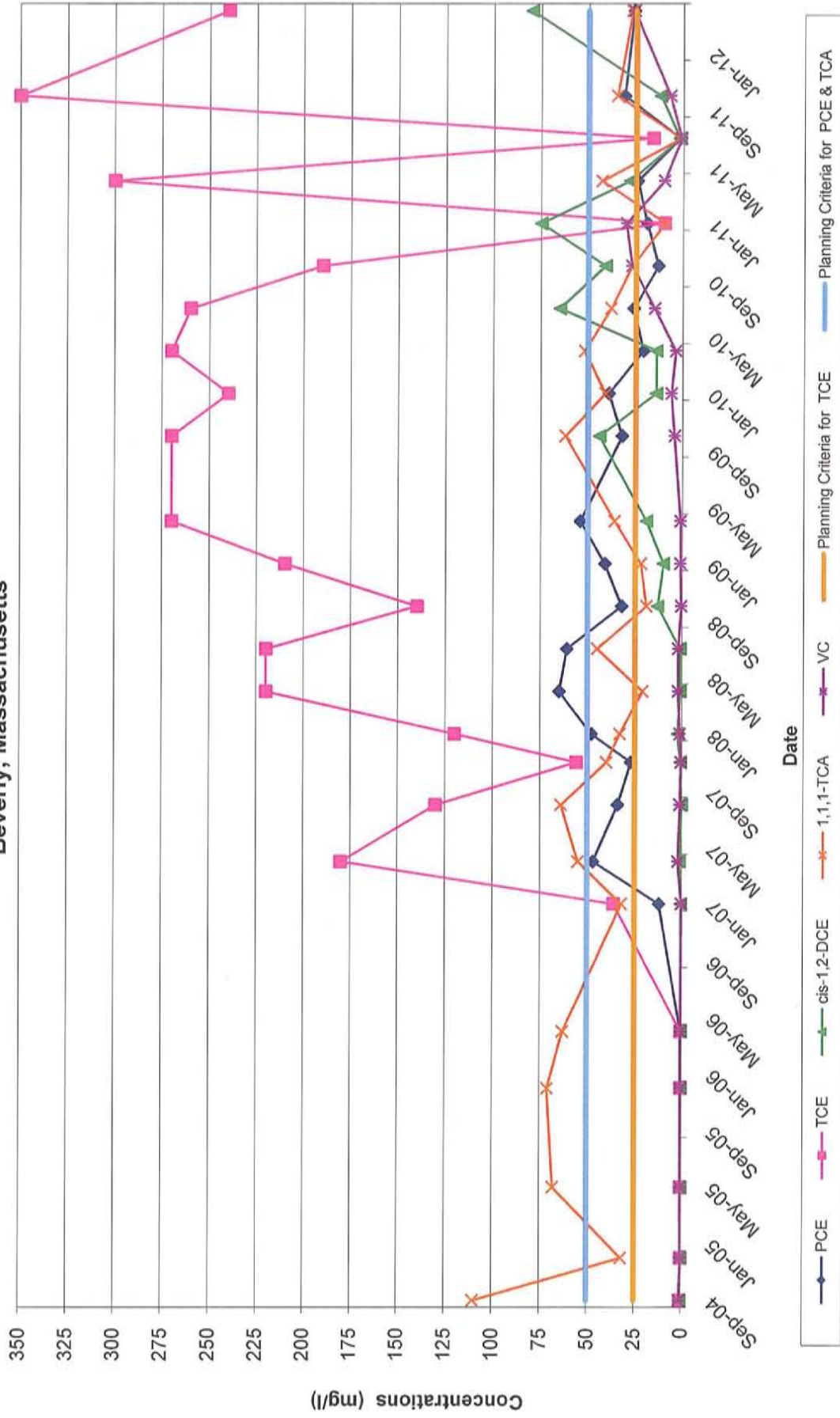


VOC Trends in Well AP-23-DO  
Former Varian Facility Site  
Beverly, Massachusetts



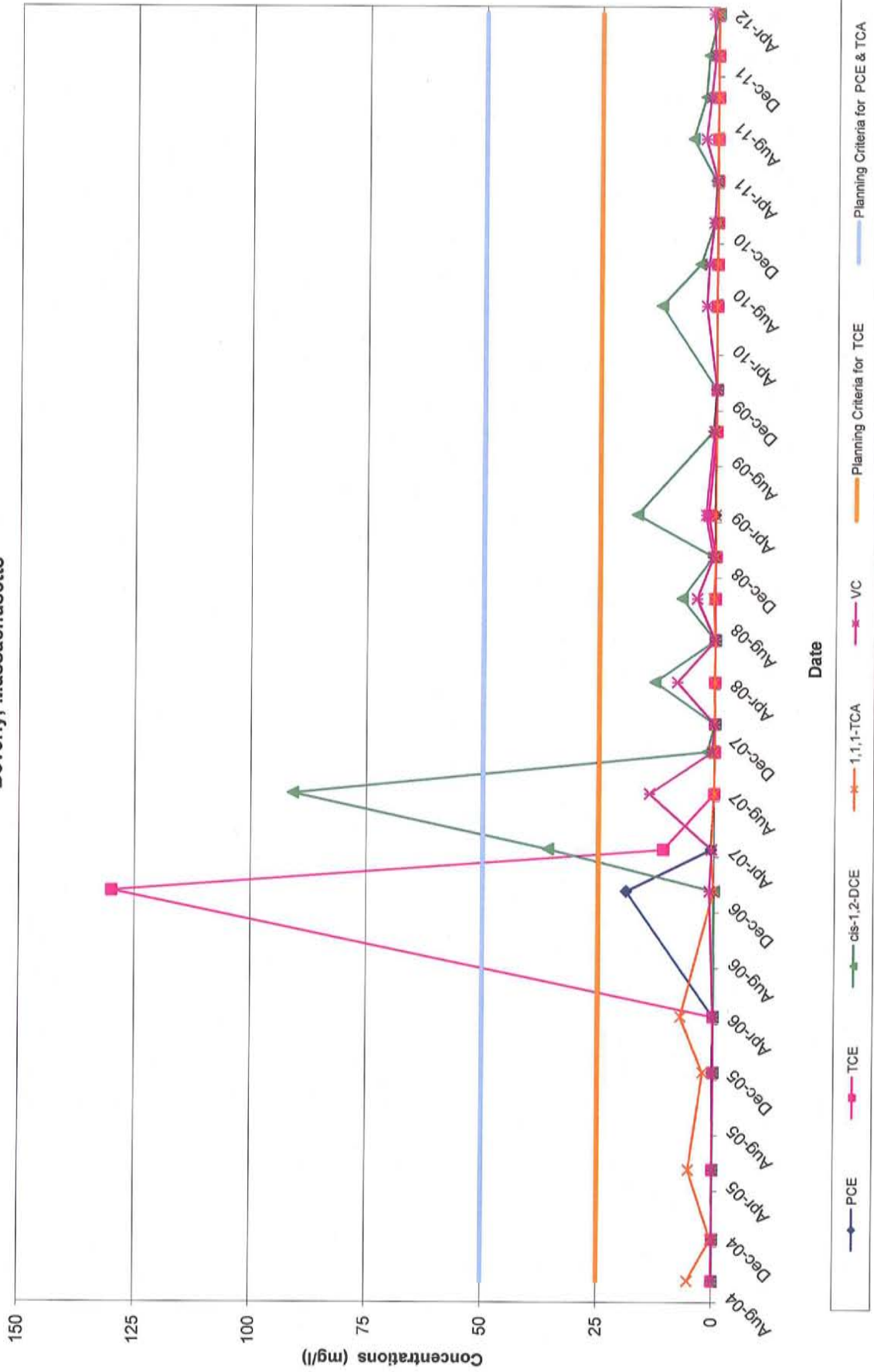
Notes: AP23-DO is a deep overburden well northeast of Building 3. Permanganate injection completed in 2003-2004 and bio-injection completed in 2007-2008 and 2010-2011. See end of appendix for additional notes.

VOC Trends in Well AP-24-DO  
Former Varian Facility Site  
Beverly, Massachusetts



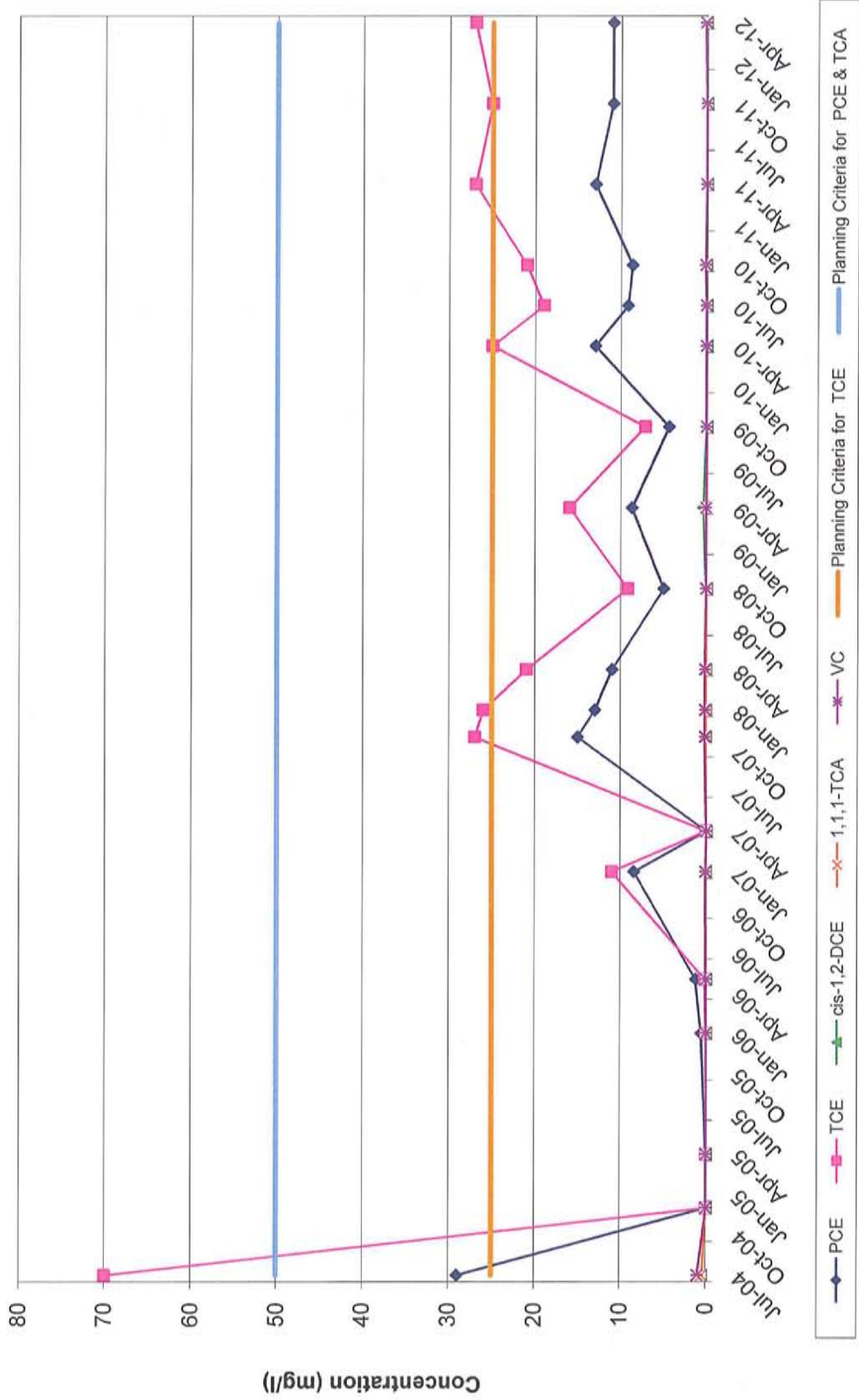
Notes: AP24-DO is a deep overburden well northeast of Building 3. Permanganate injection was conducted in 2003-2004 and bio-injection in 2006-2008 and 2010-2011. See end of appendix for additional notes.

VOC Trends in Well AP-25-DO  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: AP25-DO is a deep overburden well east of Building 3 where permanganate injection was conducted in 2004 and bio-injection in 2007. See end of appendix for additional notes.

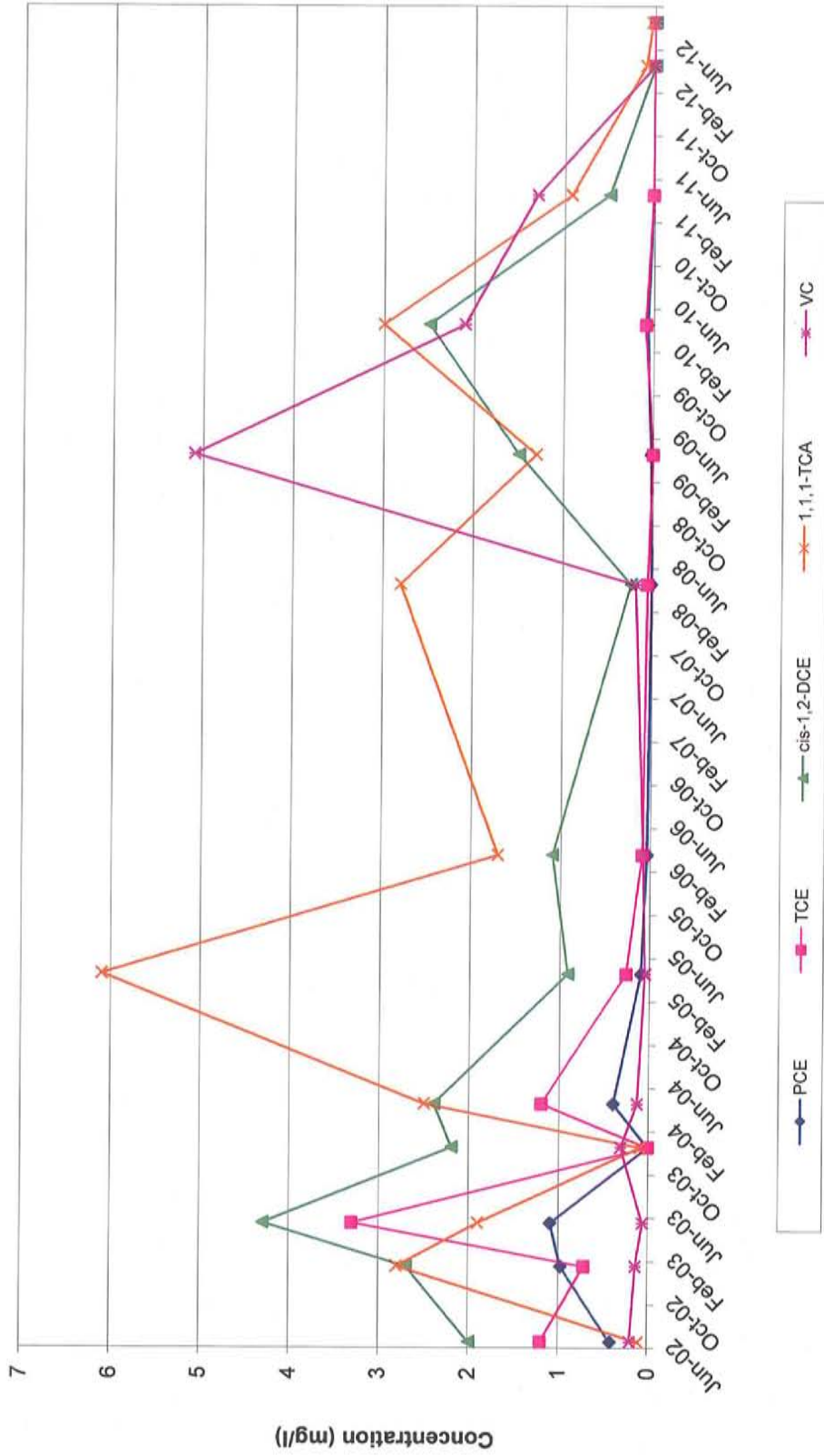
VOC Trends in Well AP-26-DO  
 Former Varian Facility Site  
 Beverly, Massachusetts



Notes: AP-26-DO is a deep overburden well just west of Building 1 where permanganate injection was conducted in 2004 and 2012. See end of appendix for additional notes.

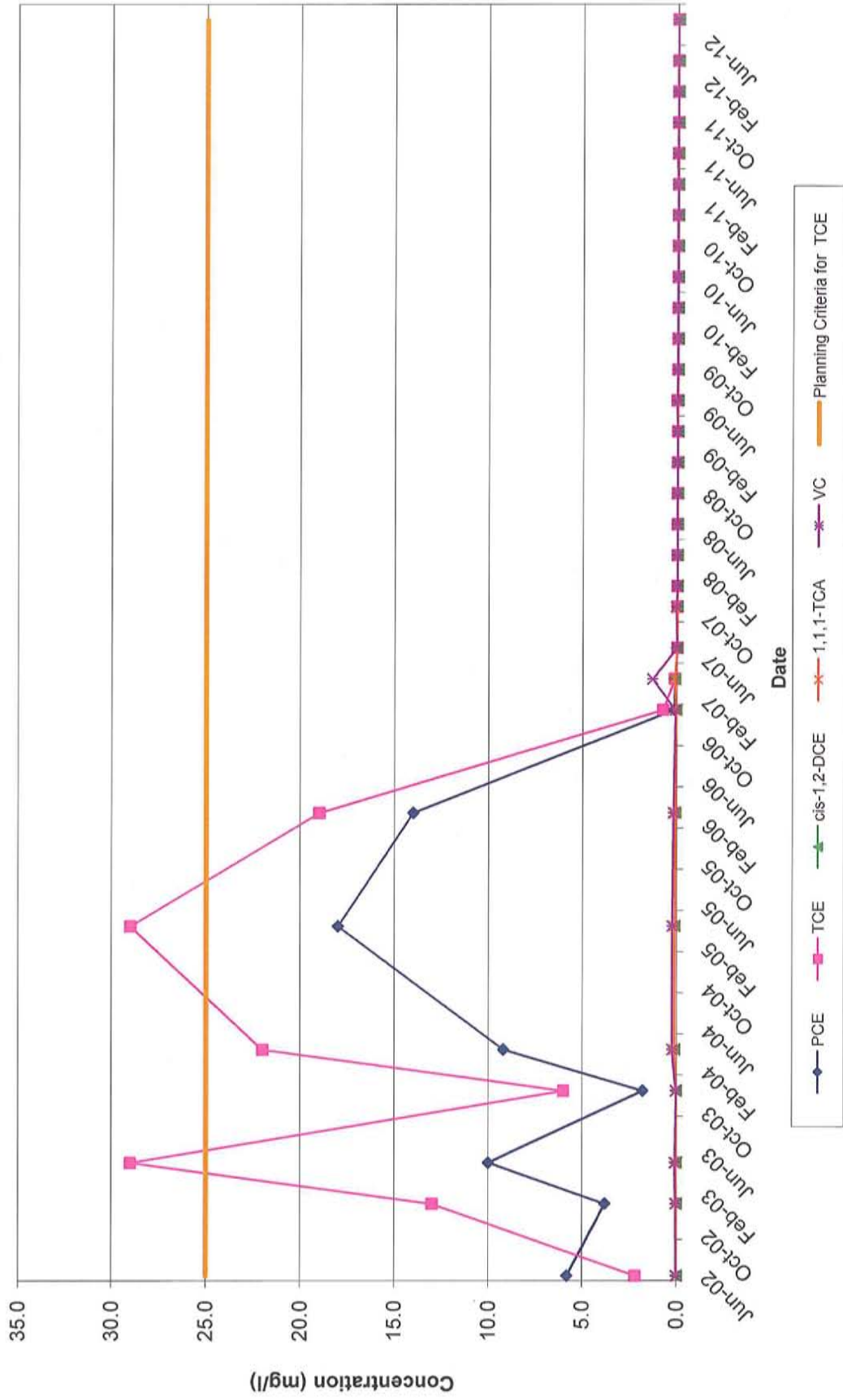


VOC Trends in Well MW-008  
Former Varian Facility Site  
Beverly, Massachusetts



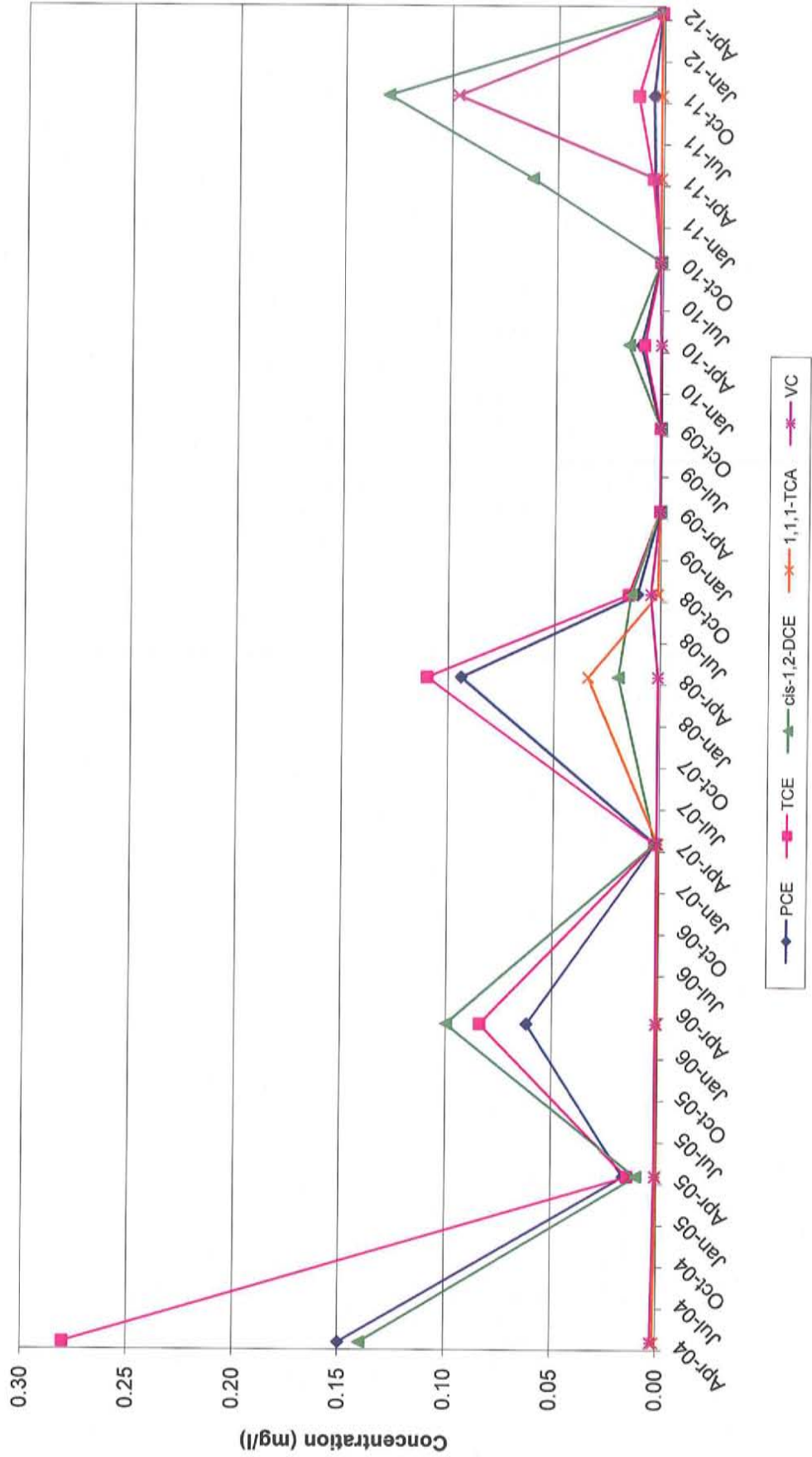
Notes: MW-8 is a shallow overbuden well located in the parking lot east of Buildings 6 and 9. See end of appendix for additional notes.

VOC Trends in Well MW-009  
Former Varian Facility Site  
Beverly, Massachusetts



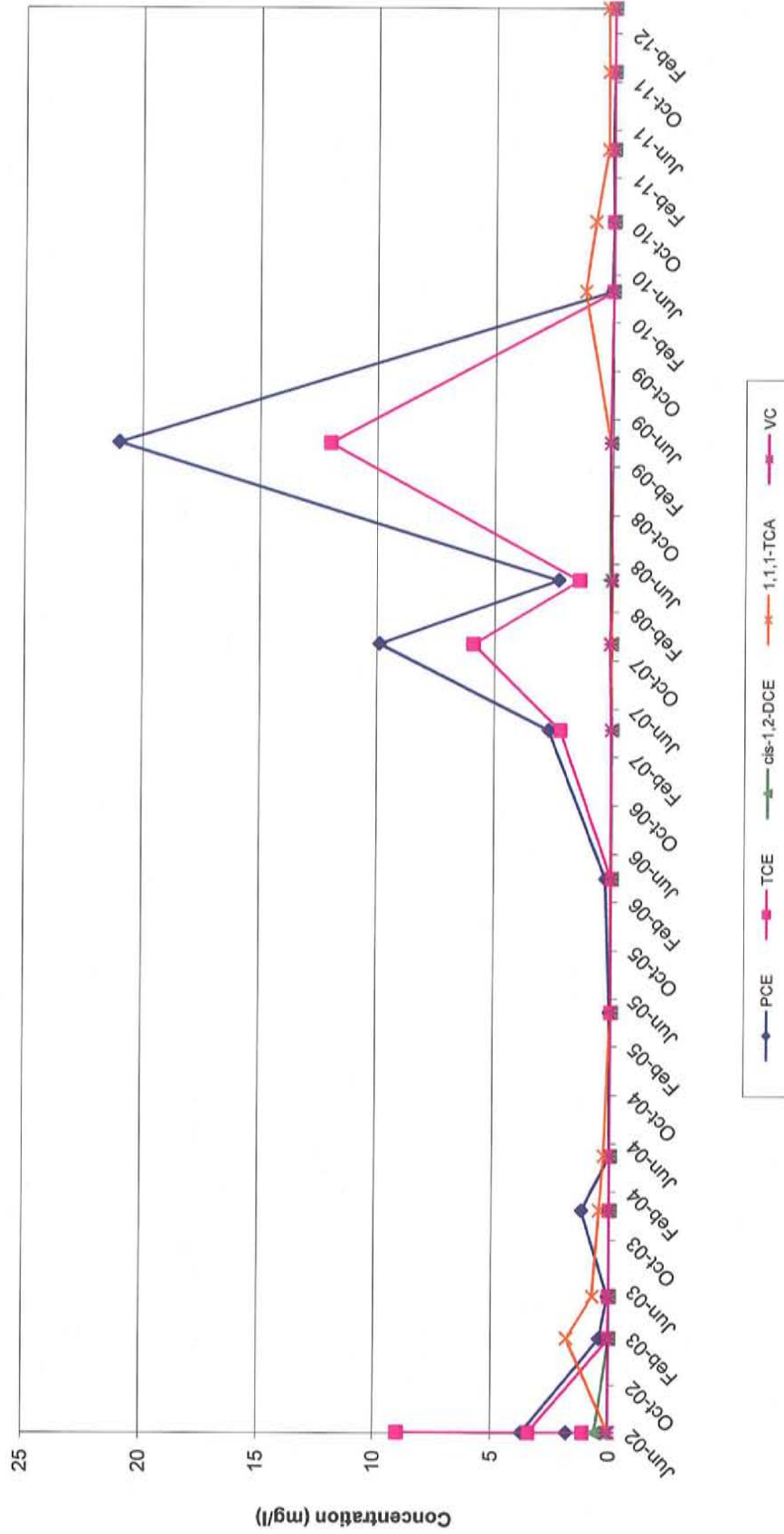
Notes: MW-9 is a shallow overburden well adjacent to Building 9 where bio-injection was conducted in 2006, 2007, 2009, and 2012. See end of appendix for additional notes.

VOC Trends in Well MW-009A  
 Former Varian Facility Site  
 Beverly, Massachusetts



Notes: MW-9A is a shallow overburden well adjacent to Building 9.  
 See end of appendix for additional notes.

VOC Trends in Well MW-013  
Former Varian Facility Site  
Beverly, Massachusetts

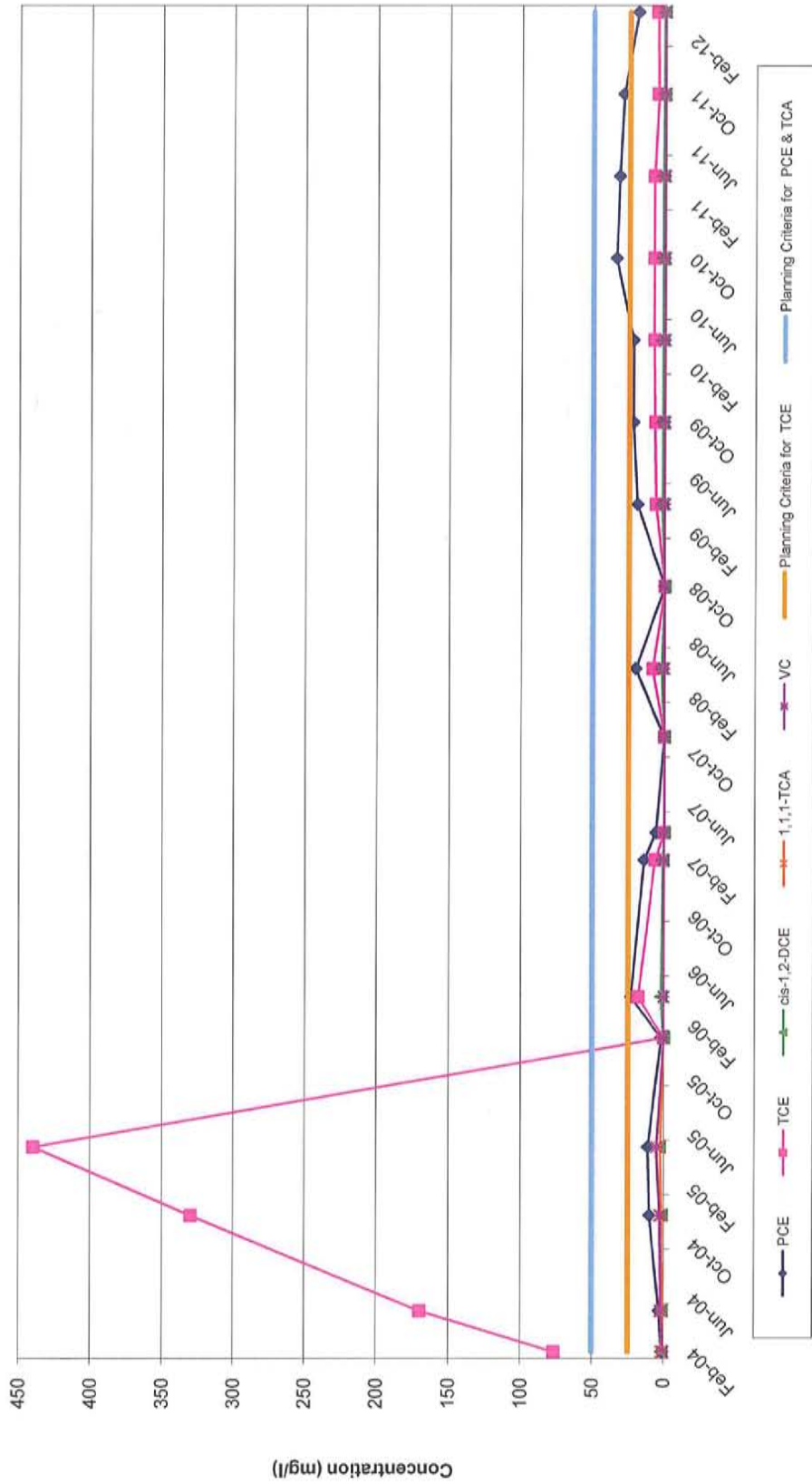


Note: MW-13 is a deep overburden well located to the northeast of Building 3 where permanganate injection was conducted in 2002 and 2010. See end of appendix for additional notes.



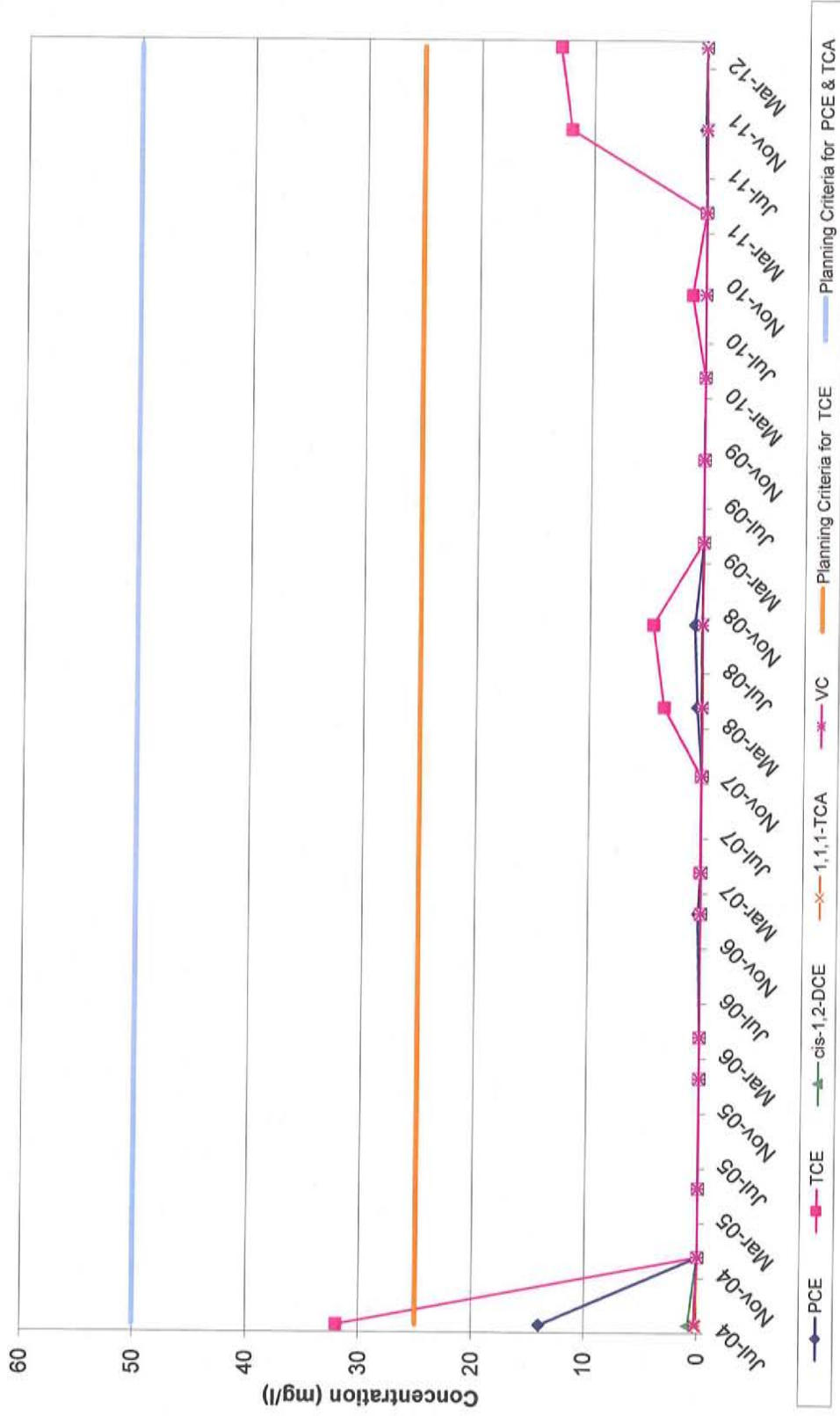
**BUILDING 5 TREATMENT AREA**

VOC Trends in Well OB-35-DO  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: OB35-DO is a deep overburden well inside Building 5 where permanganate injection was conducted from 2005 to 2008 and 2010 to 2012. See end of appendix for additional notes.

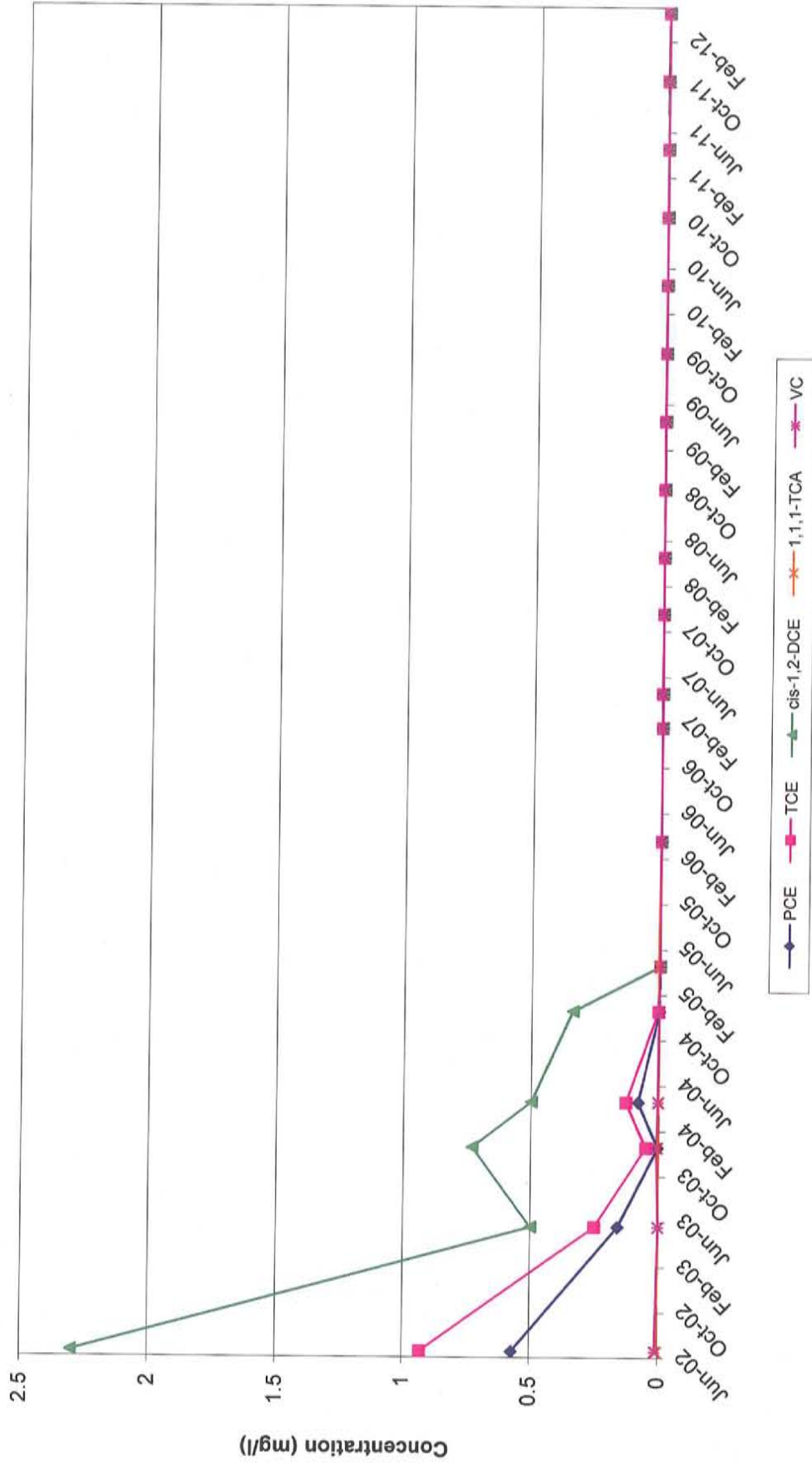
VOC Trends in Well AP-27-DO  
 Former Varian Facility Site  
 Beverly, Massachusetts



Note: AP-27-DO is a deep overburden well east of Building 5 where permanganate injection was conducted in 2004 and 2005. See end of appendix for additional notes.

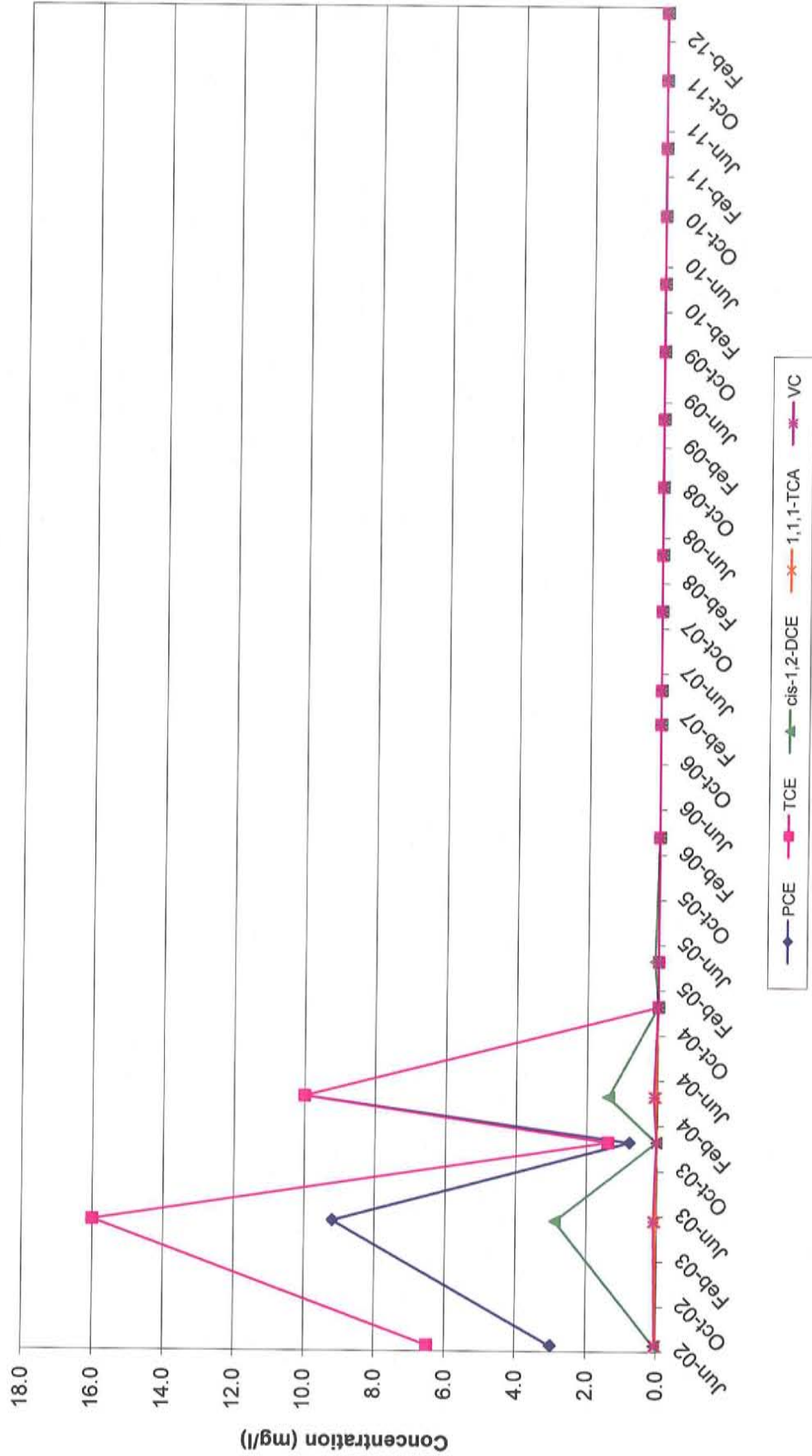
**PSL-10 TREATMENT AREA**

VOC Trends in Well CL10-BR  
Former Varian Facility Site  
Beverly, Massachusetts



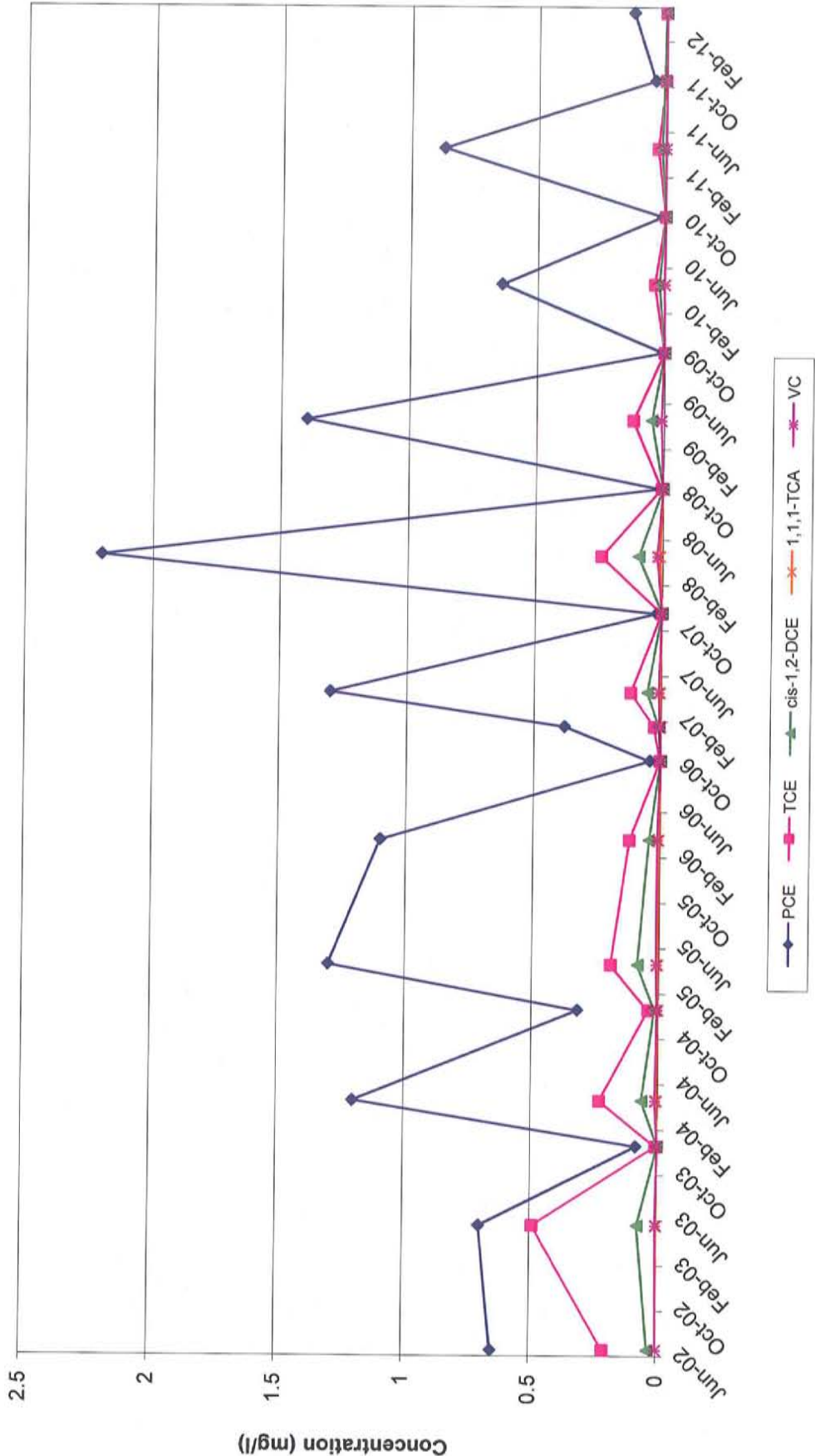
Notes: CL10-BR is a bedrock well located in the PSL10 treatment area, south of the facility. See end of appendix for additional notes.

VOC Trends in Well CL10-DO  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: CL10-DO is a deep overburden well located in the PSL10 treatment area, south of the facility. See end of appendix for additional notes.

VOC Trends in Well CL10-S  
Former Varian Facility Site  
Beverly, Massachusetts

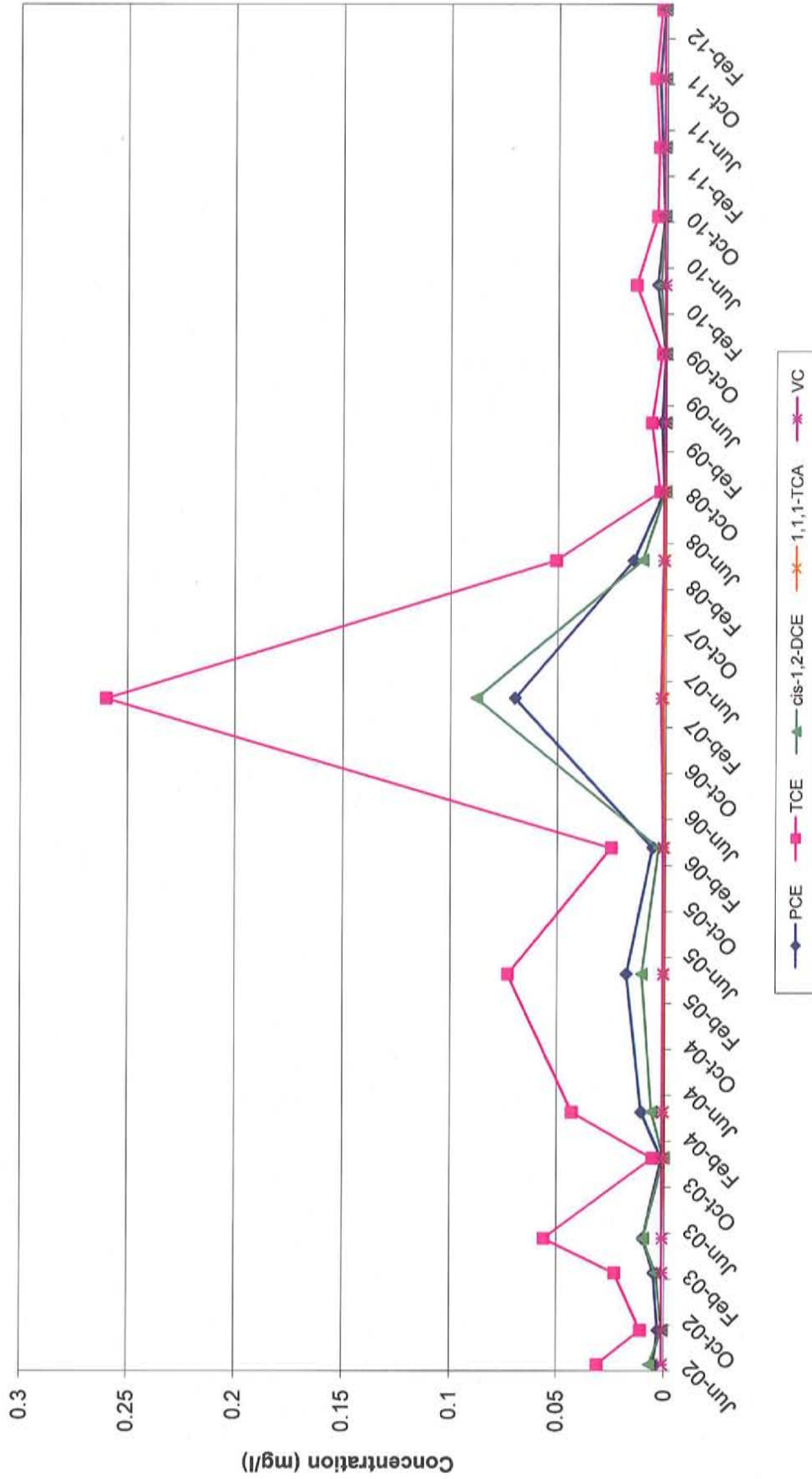


Notes: CL10-S is a shallow overburden well located in the PSL10 treatment area, south of the facility. See end of appendix for additional notes.

TOZER ROAD TREATMENT AREA SOUTH OF ROUTE 128

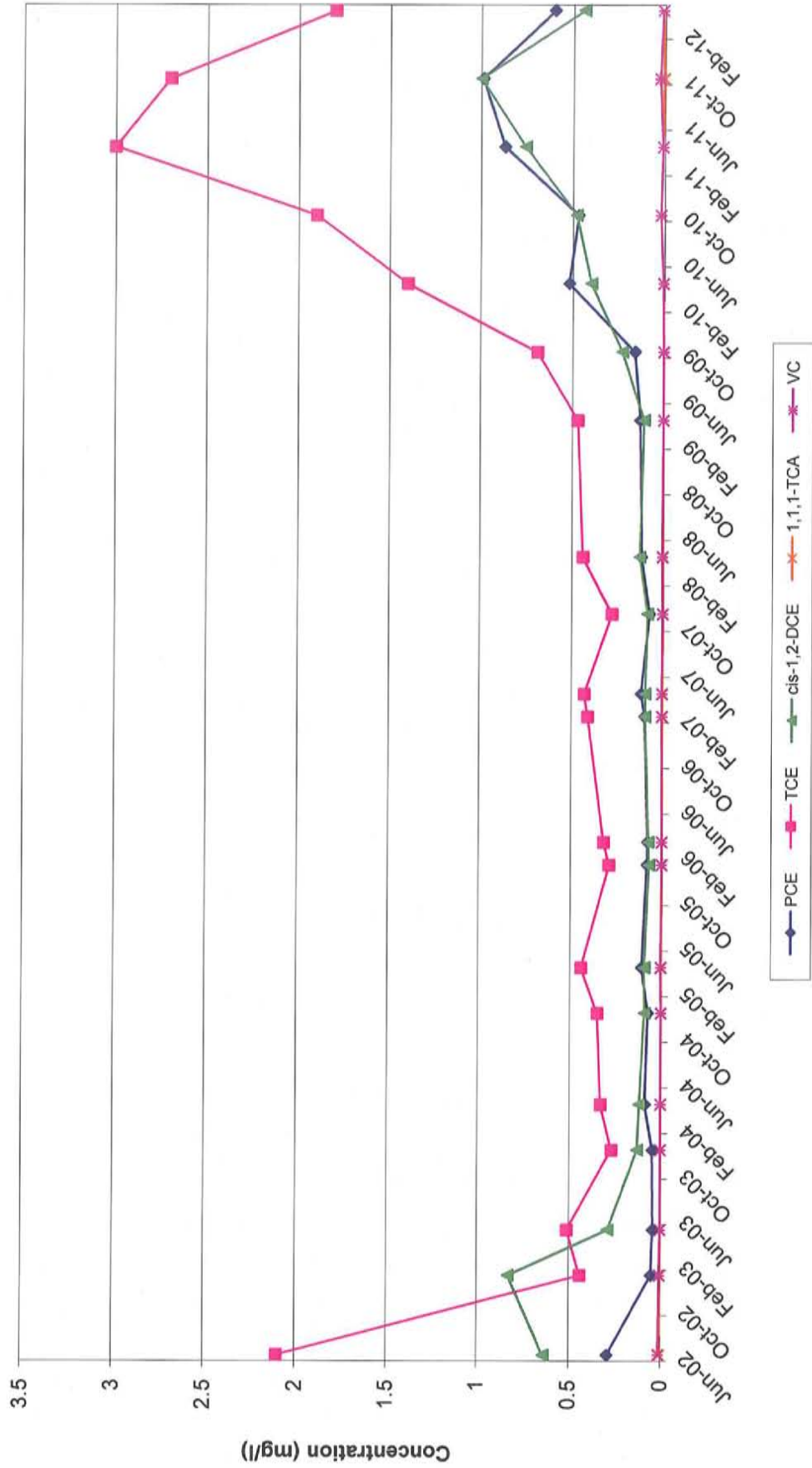


VOC Trends in Well OB-05-S  
Former Varian Facility Site  
Beverly, Massachusetts



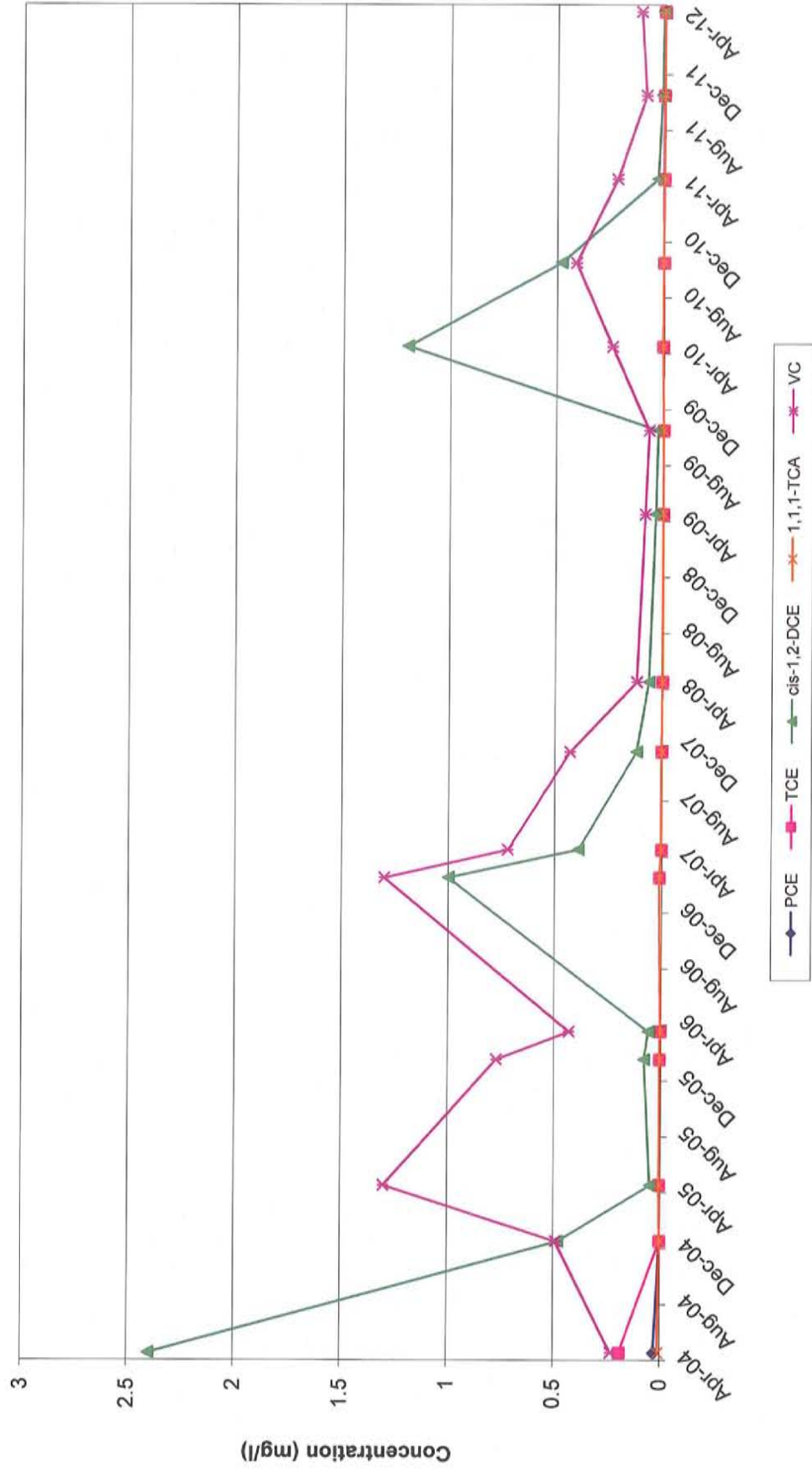
Note: OB-5-S is a shallow well south of the 28 Tozer Road treatment area. See end of appendix for additional notes.

VOC Trends in Well OB-05-DO  
Former Varian Facility Site  
Beverly, Massachusetts



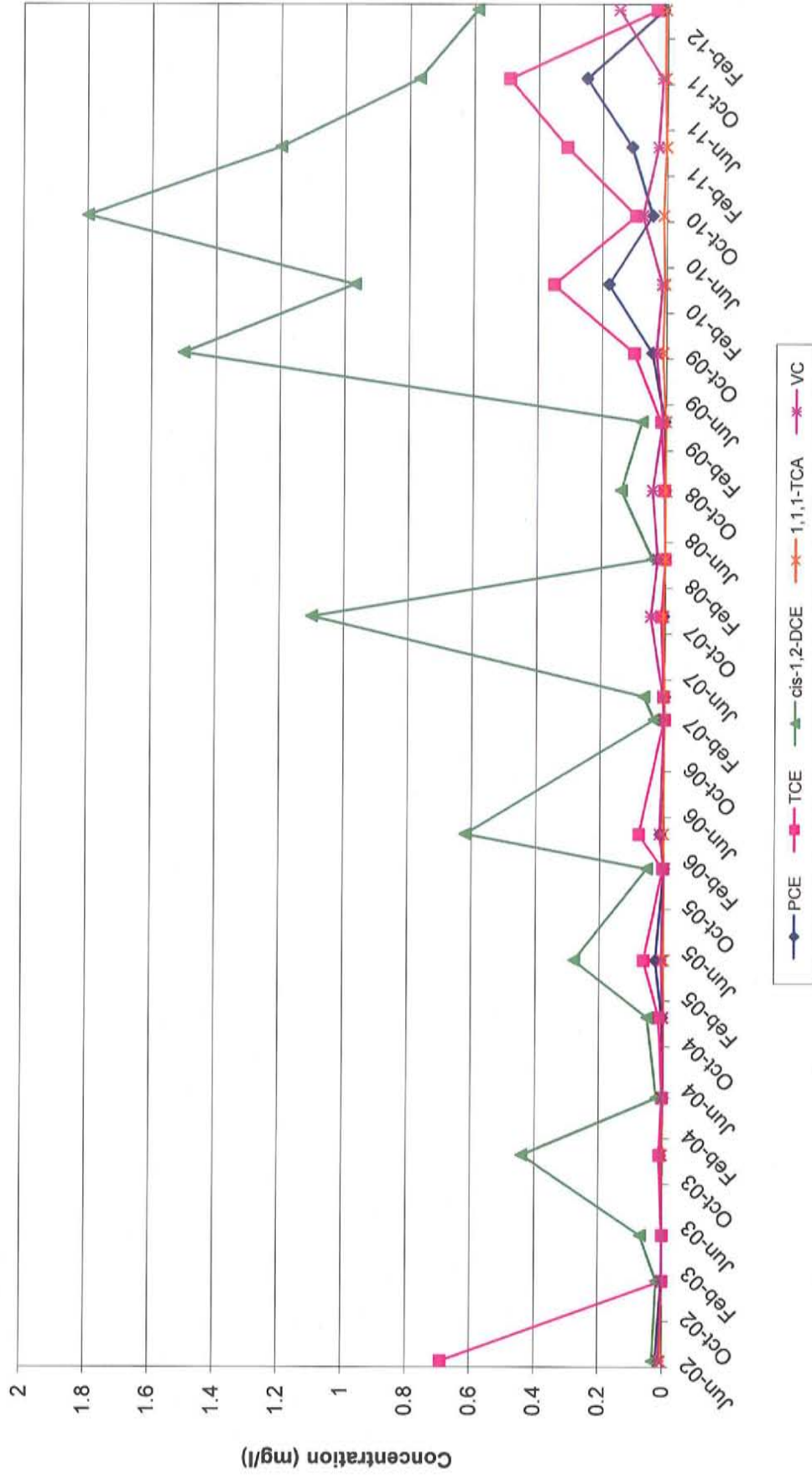
Note: OB-5-DO is a deep overburden well south of the 28 Tozer Road treatment area. See end of appendix for additional notes.

VOC Trends in Well OB-05-BR  
Former Varian Facility Site  
Beverly, Massachusetts



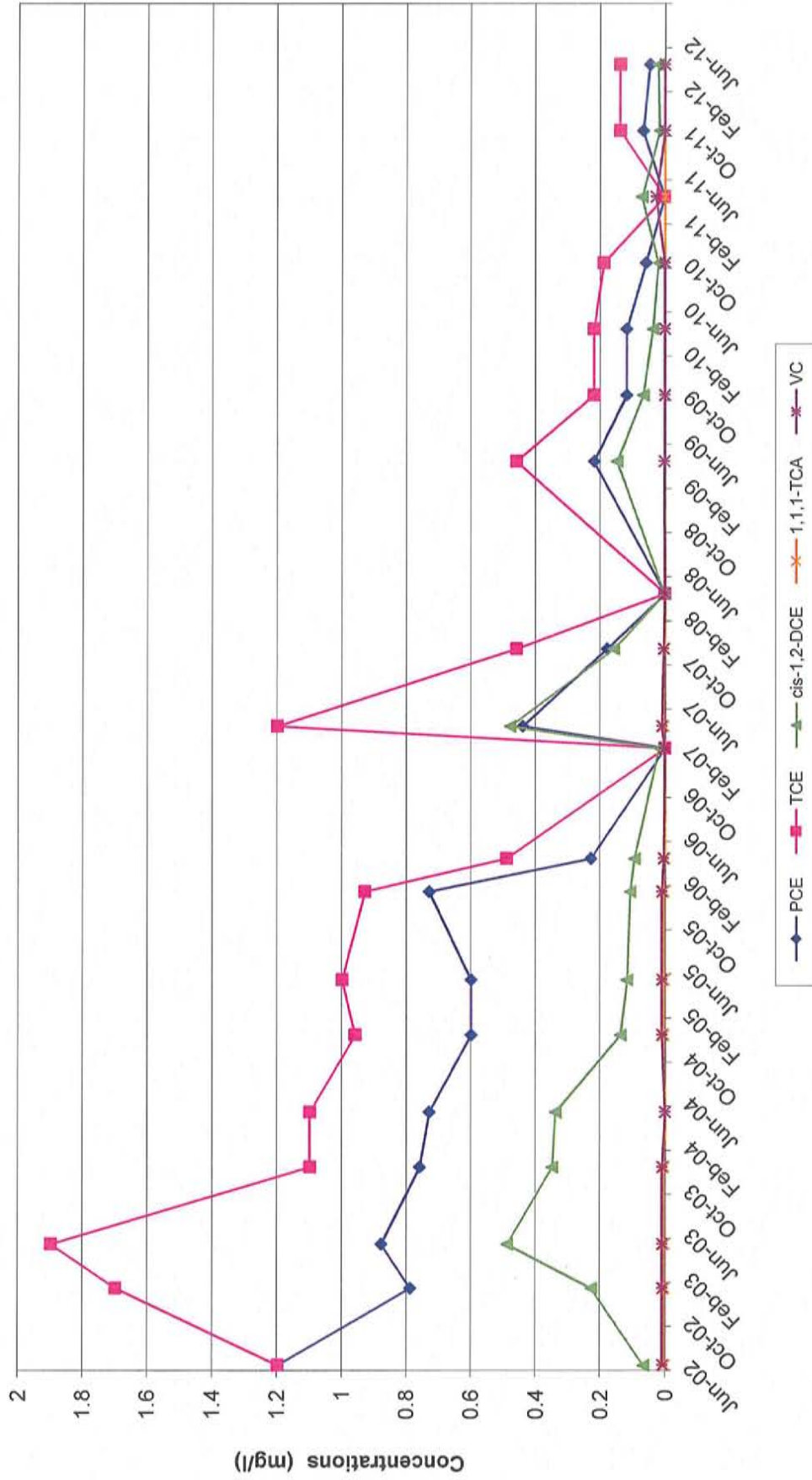
Note: OB-5-BR is a bedrock well south of the 28 Tozer Road treatment area.  
See end of appendix for additional notes.

VOC Trends in Well OB-06-DO  
Former Varian Facility Site  
Beverly, Massachusetts



Note: OB-6-DO is a deep overburden well west of the 28 Tozer Road treatment area on Sonning Road. See end of appendix for additional notes.

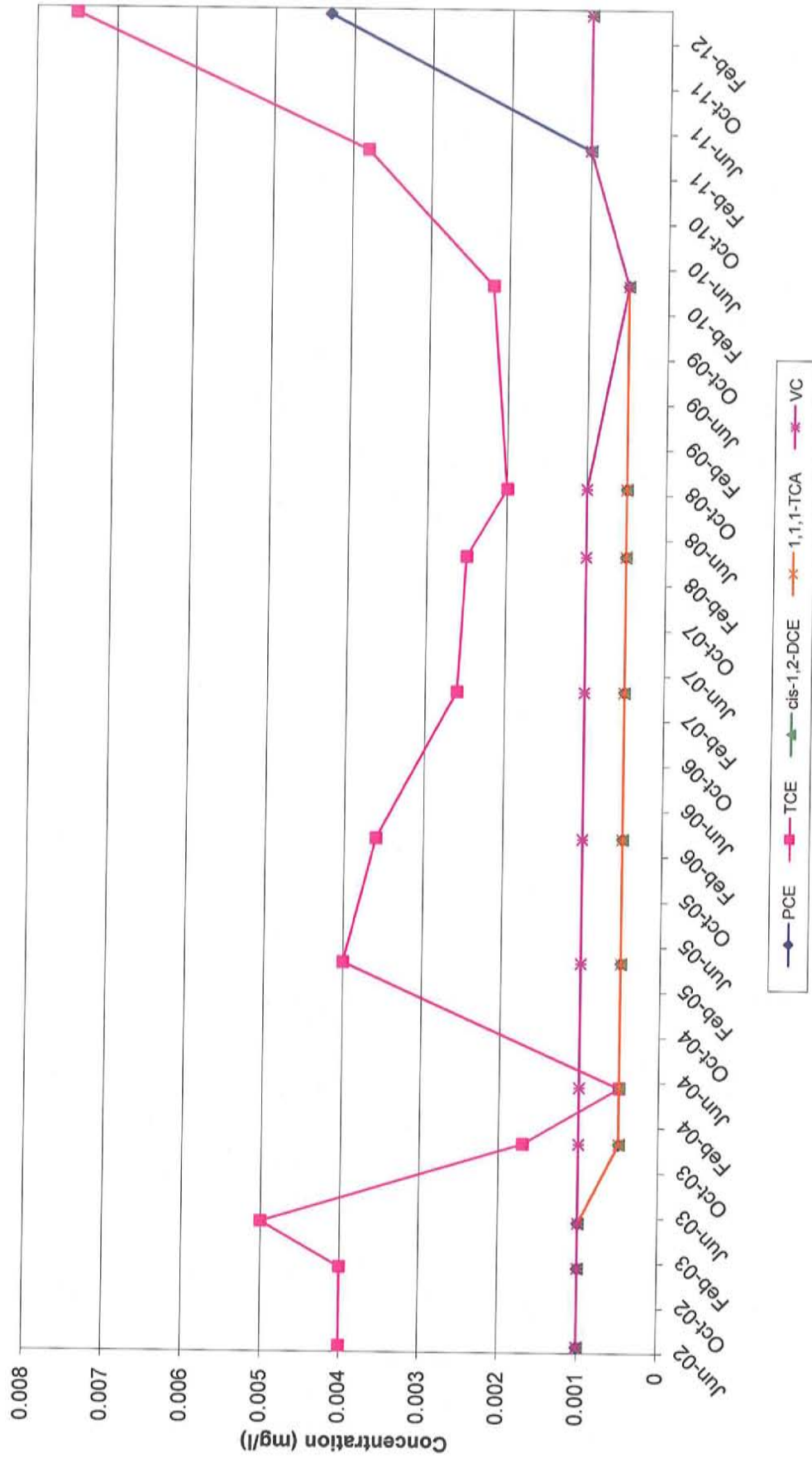
VOC Trends in Well OB-06-BR  
Former Varian Facility Site  
Beverly, Massachusetts



Note: OB-6-BR is a bedrock well west of the 28 Tozer Road treatment area on Sonning Road. See end of appendix for additional notes.

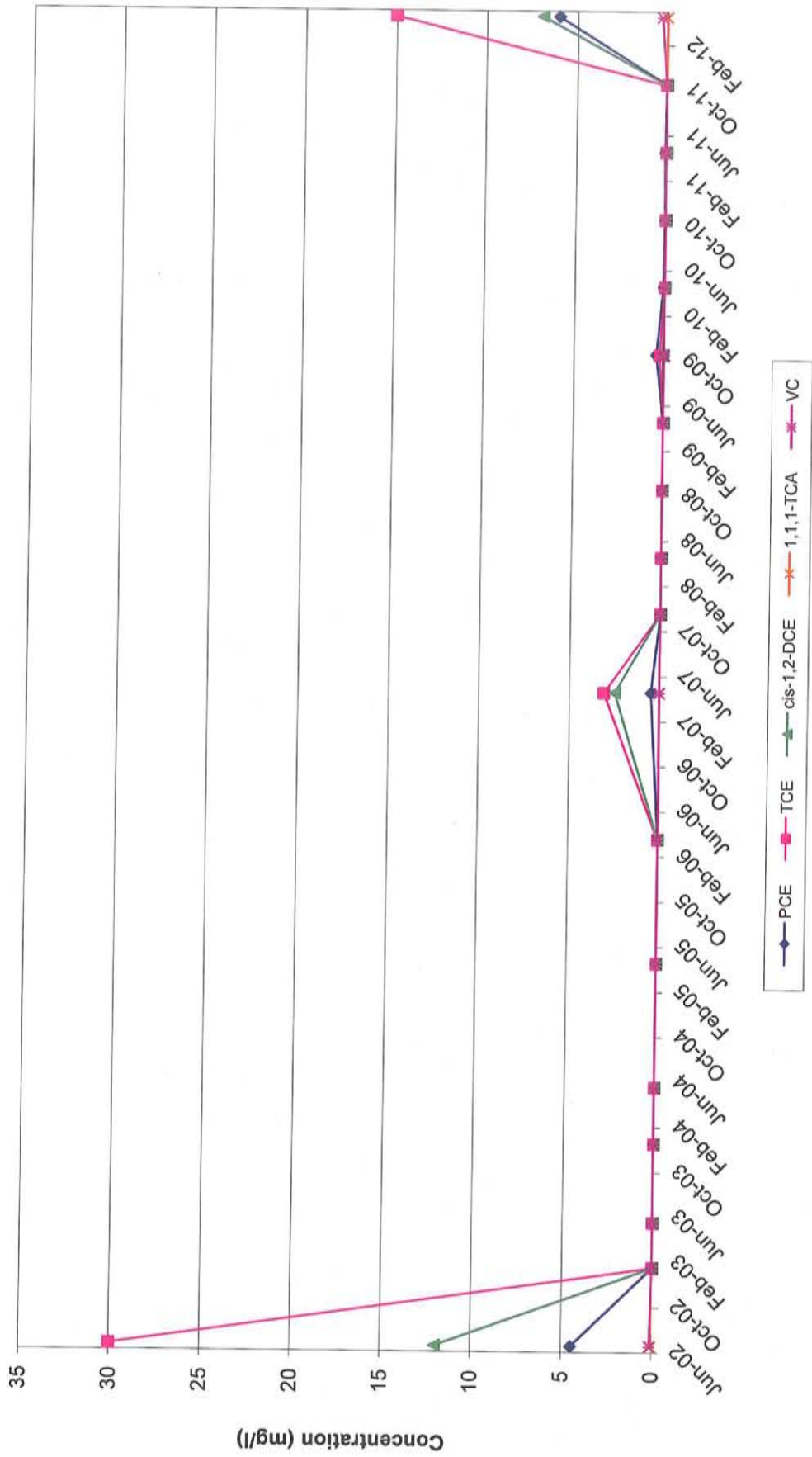


VOC Trends in Well CL03-S  
Former Varian Facility Site  
Beverly, Massachusetts



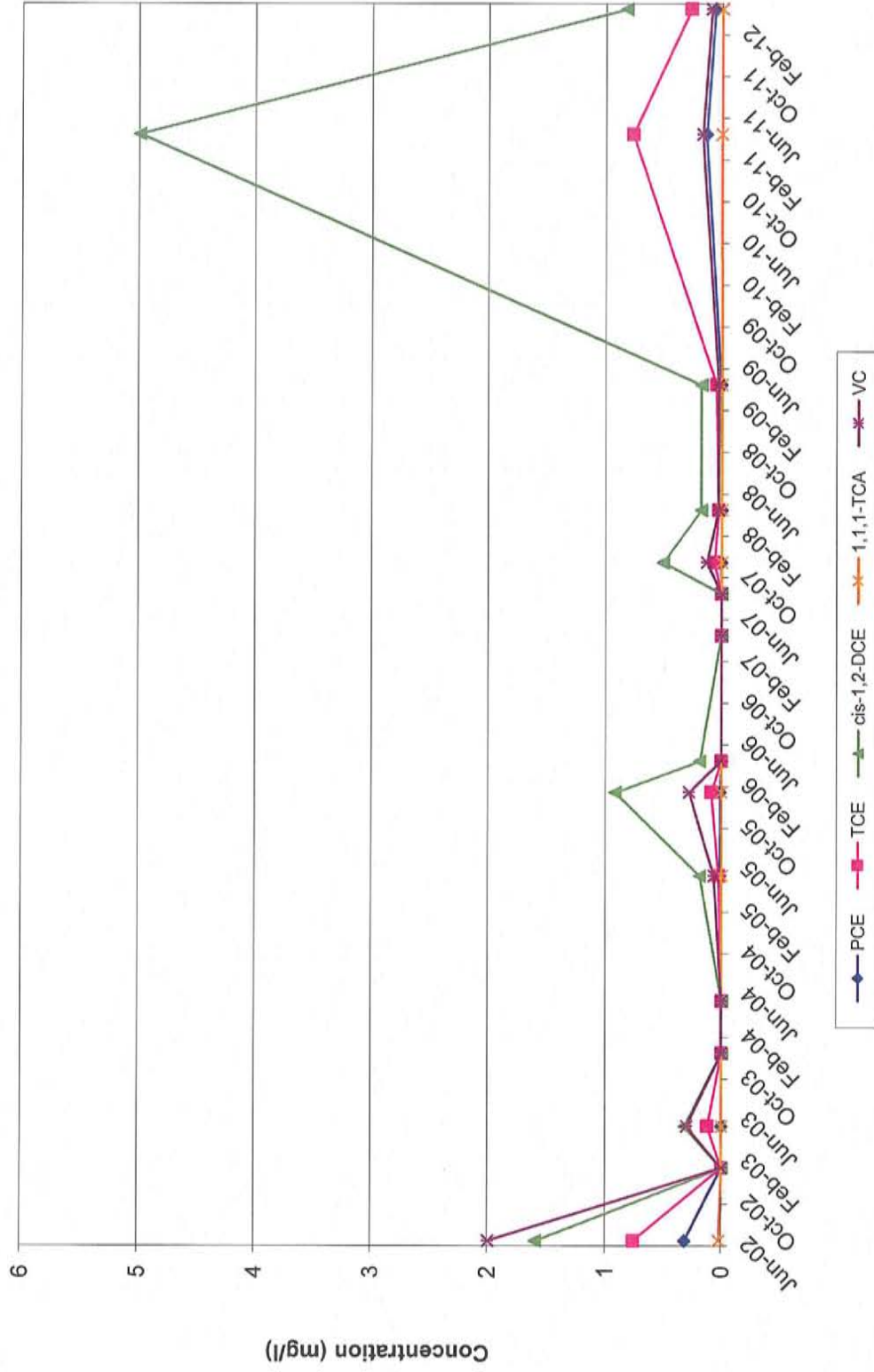
Notes: CL3-S is a shallow overburden well located at 28 Tozer Road.  
See end of appendix for additional notes.

VOC Trends in Well CL03-DO  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: CL3-DO is a deep overburden well located at 28 Tozer Road where permanganate injection was conducted 2002. See end of appendix for additional notes.

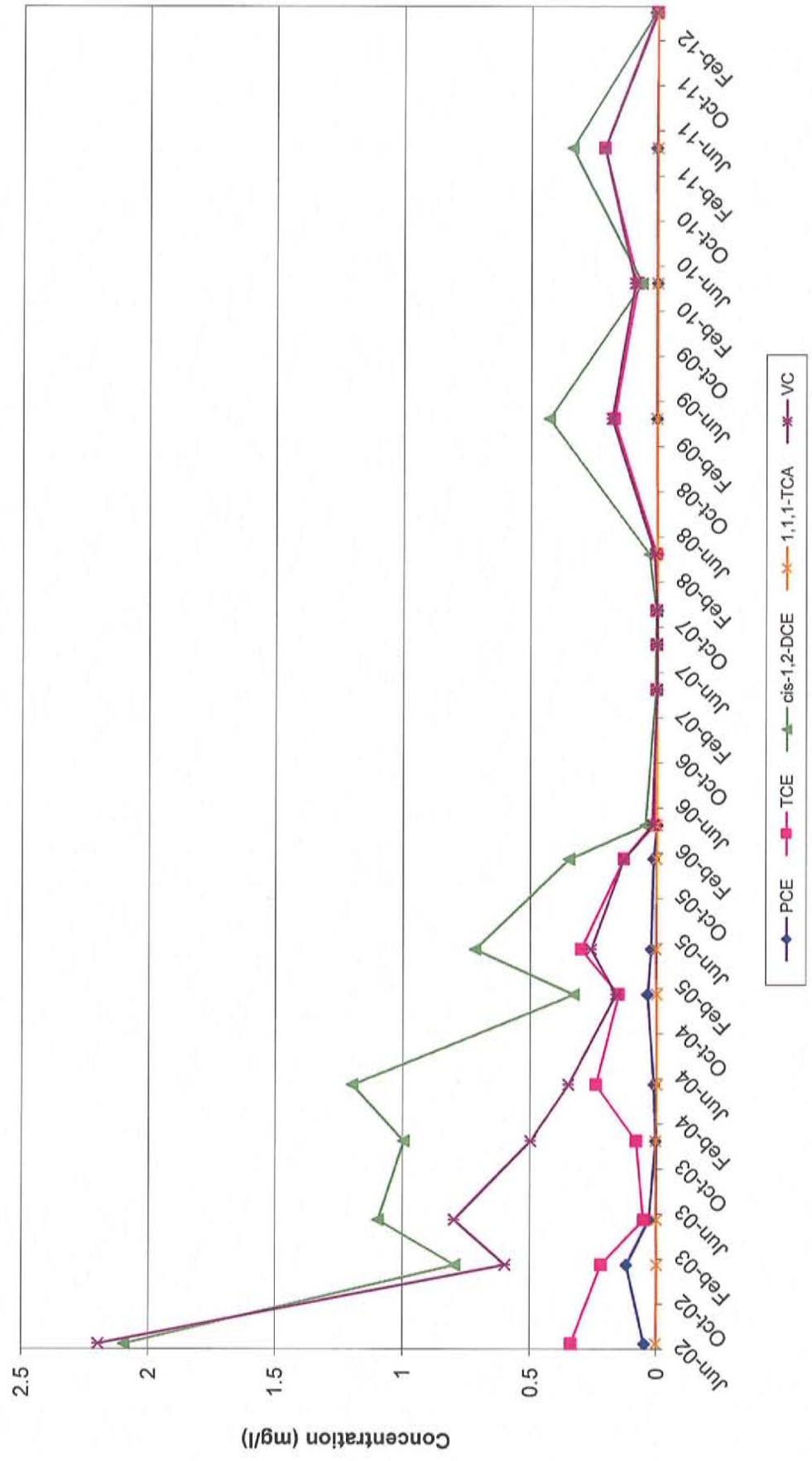
VOC Trends in Well BR-5\_ZONE3  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: BR-5\_ZONE3 is a bedrock well at 28 Tozer Road; zone 3 is the shallowest sampling zone. See end of appendix for additional notes.

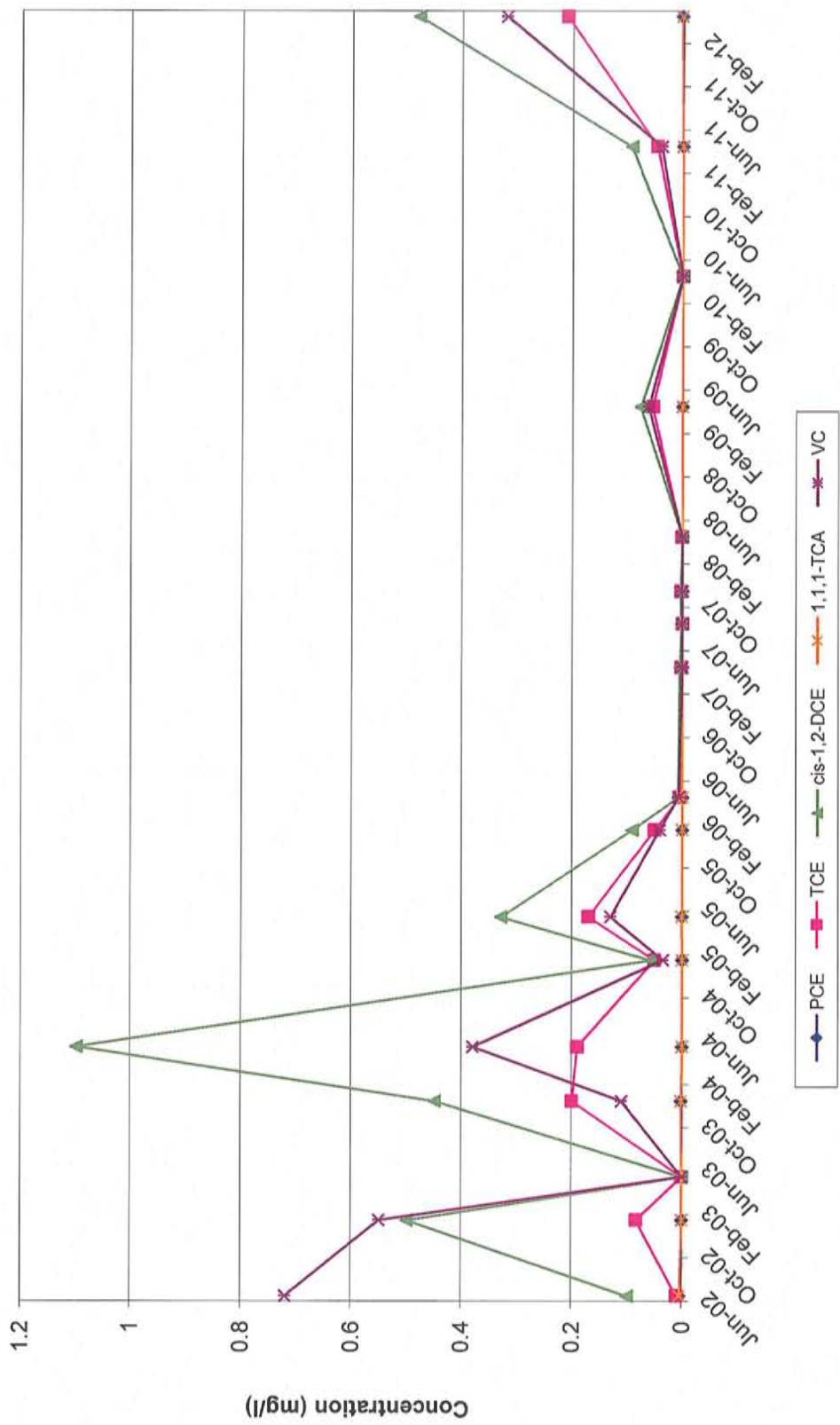


VOC Trends in Well BR-5\_ZONE2  
 Former Varian Facility Site  
 Beverly, Massachusetts



Notes: BR-5\_ZONE2 is a bedrock well at 28 Tozer Road; zone 2 is the middle sampling zone. See end of appendix for additional notes.

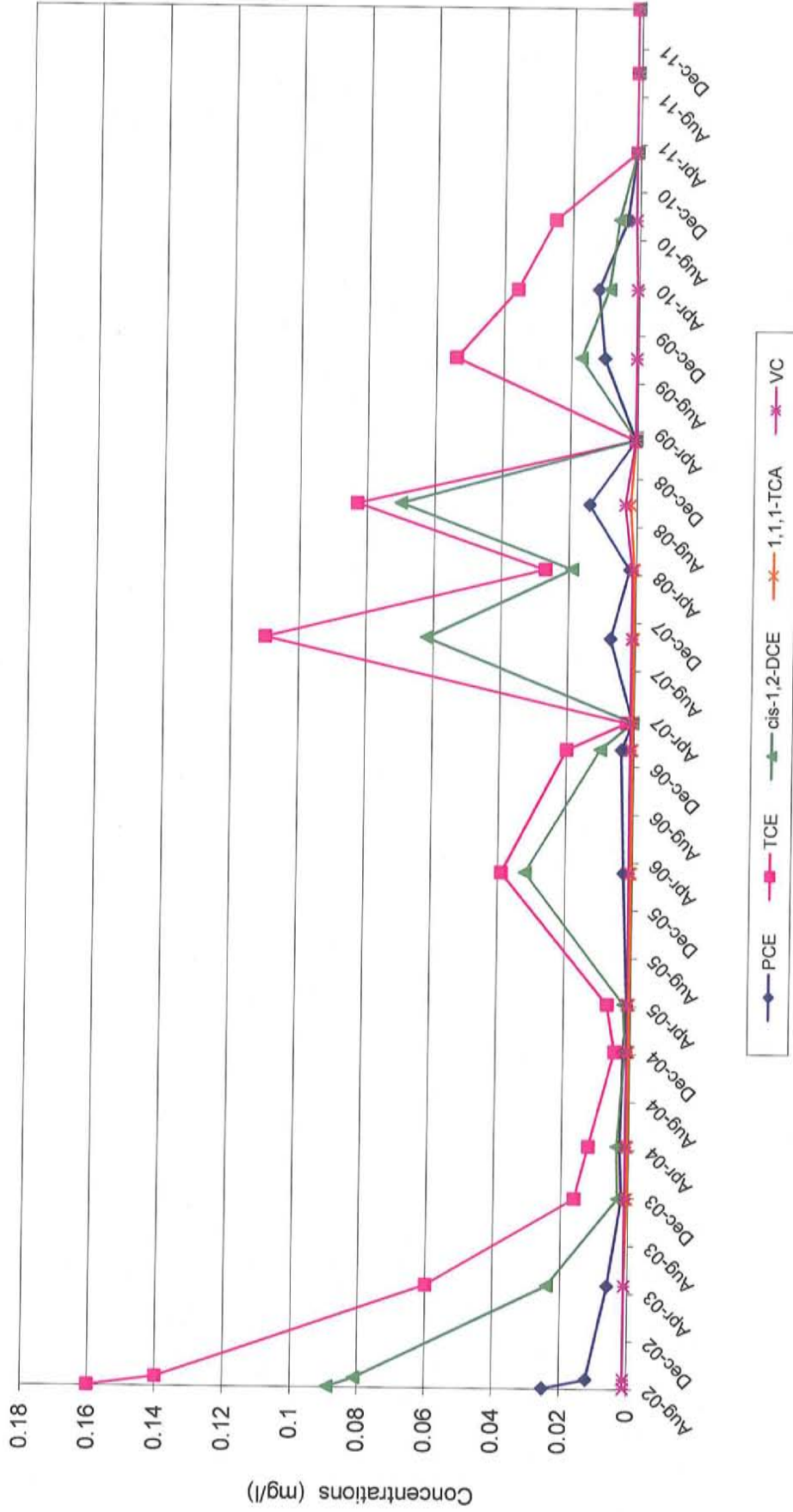
VOC Trends in Well BR-5\_ZONE1  
 Former Varian Facility Site  
 Beverly, Massachusetts



Notes: BR-5\_ZONE1 is a bedrock well at 28 Tozer Road; zone 1 is the deepest sampling zone. See end of appendix for additional notes.

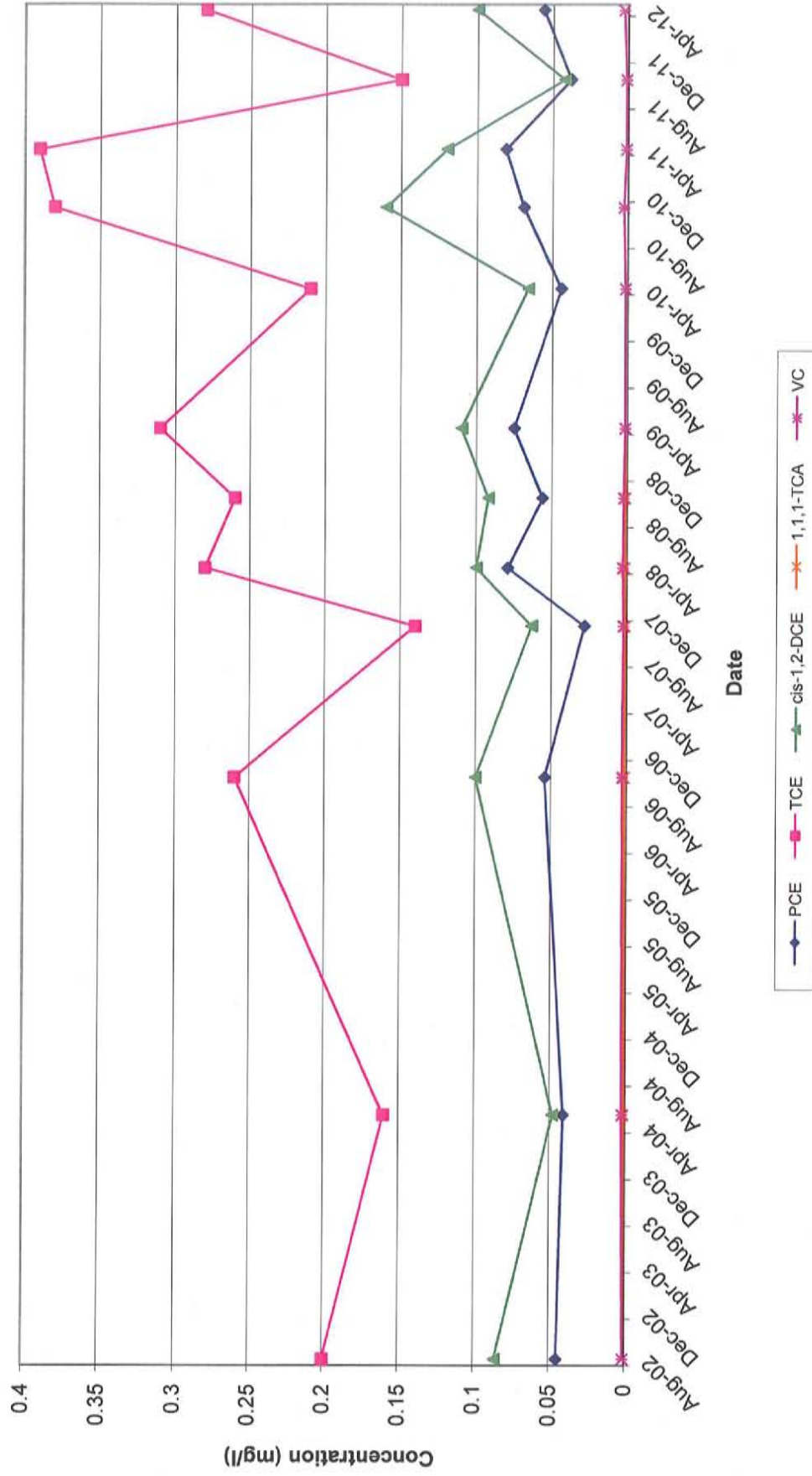
**31 TOZER ROAD TREATMENT AREA**

VOC Trends in Well AP-15S  
Former Varian Facility Site  
Beverly, Massachusetts



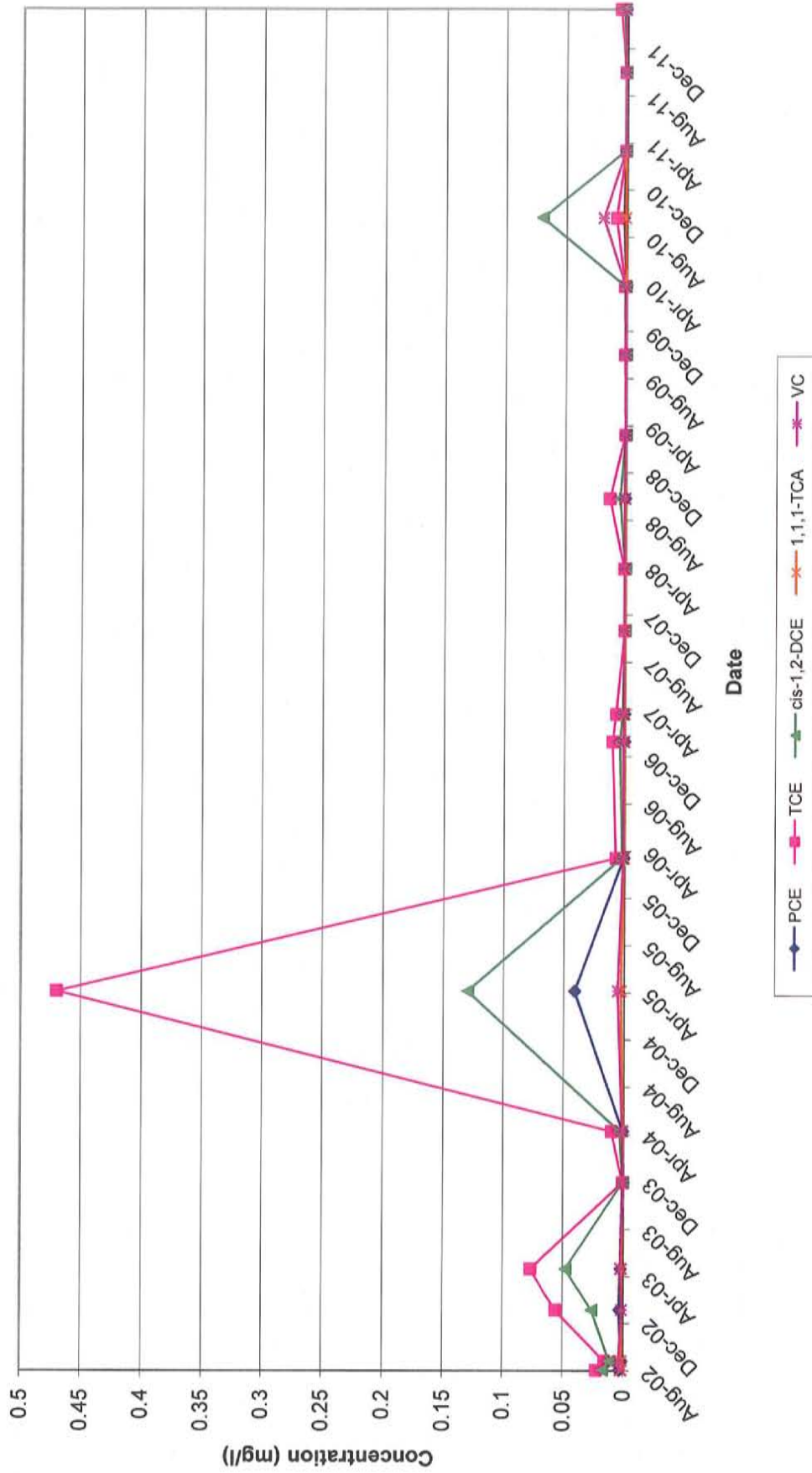
Notes: AP-15-S is a shallow well located at 31 Tozer Road.  
See end of appendix for additional notes.

VOC Trends in Well OB-08-S  
Former Varian Facility Site  
Beverly, Massachusetts



Note: OB-08-S is a shallow overburden well located south of 39 Tozer Road. See end of appendix for additional notes.

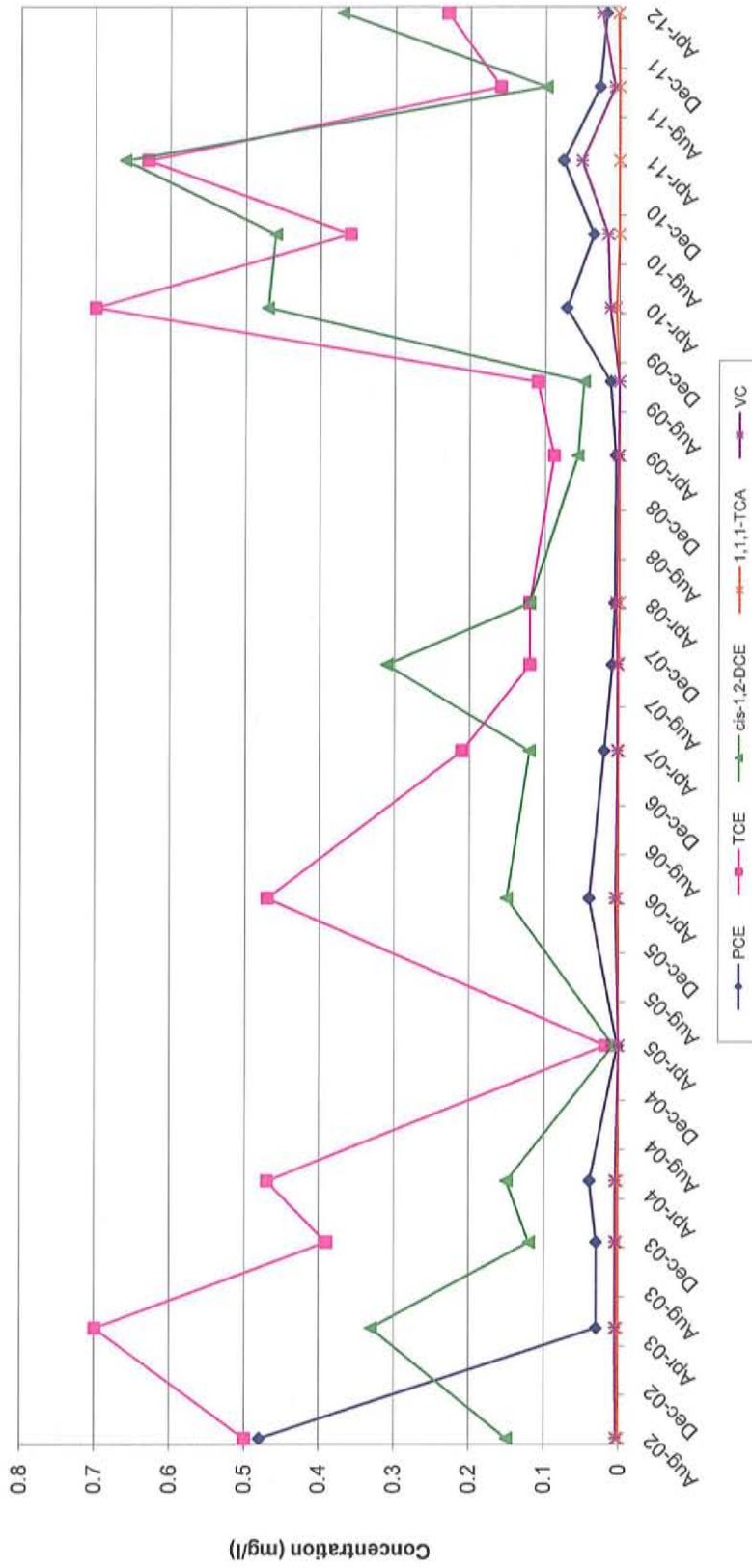
VOC Trends in Well OB-18-S  
Former Varian Facility Site  
Beverly, Massachusetts



Note: OB-18-S is a shallow overburden well located at 31 Tozer Road. See end of appendix for additional notes.

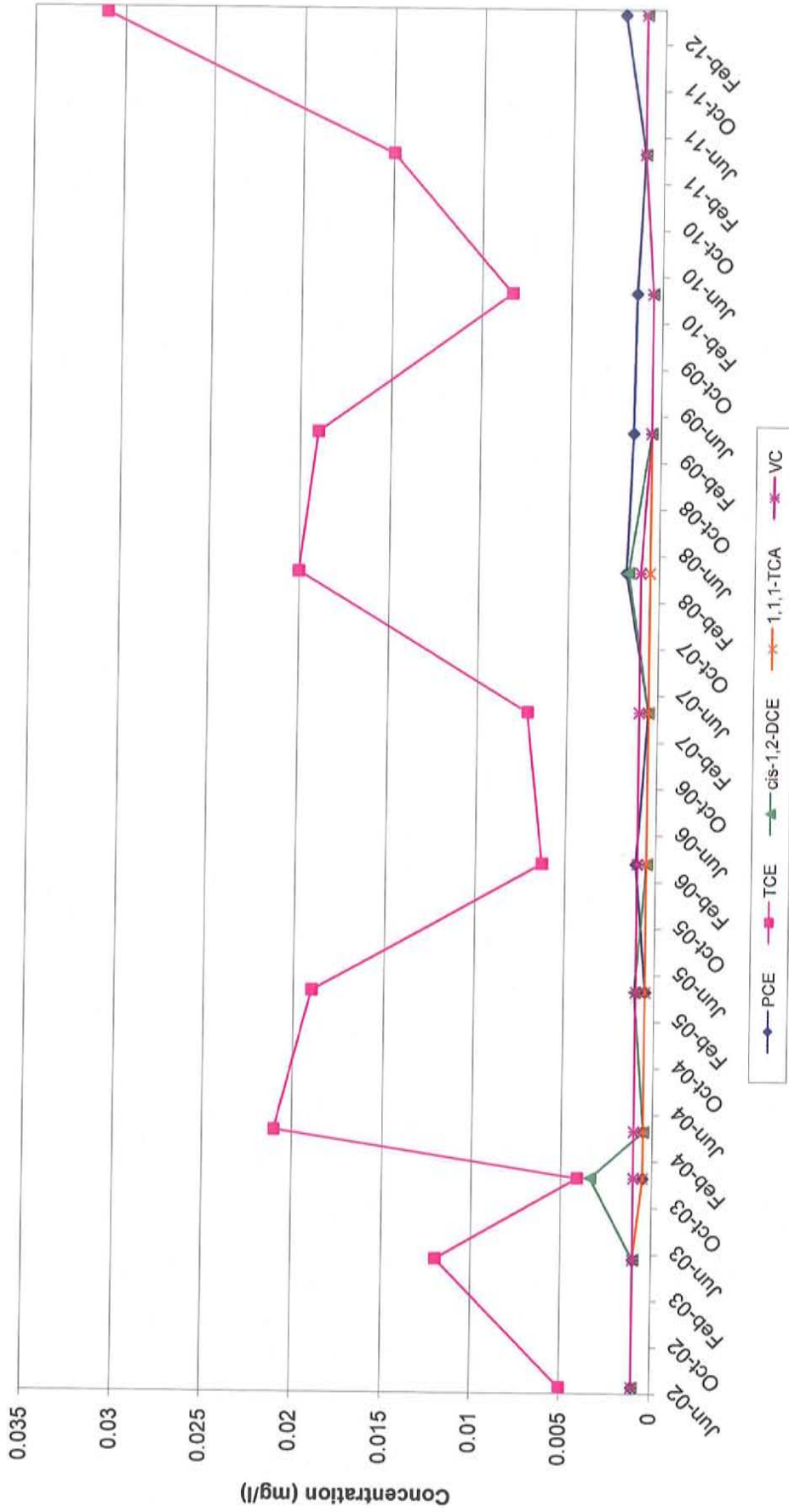


VOC Trends in Well OB-18-DO  
 Former Varian Facility Site  
 Beverly, Massachusetts



Notes: OB18-DO is a deep overburden well located at 31 Tozer Road.  
 See end of appendix for additional notes.

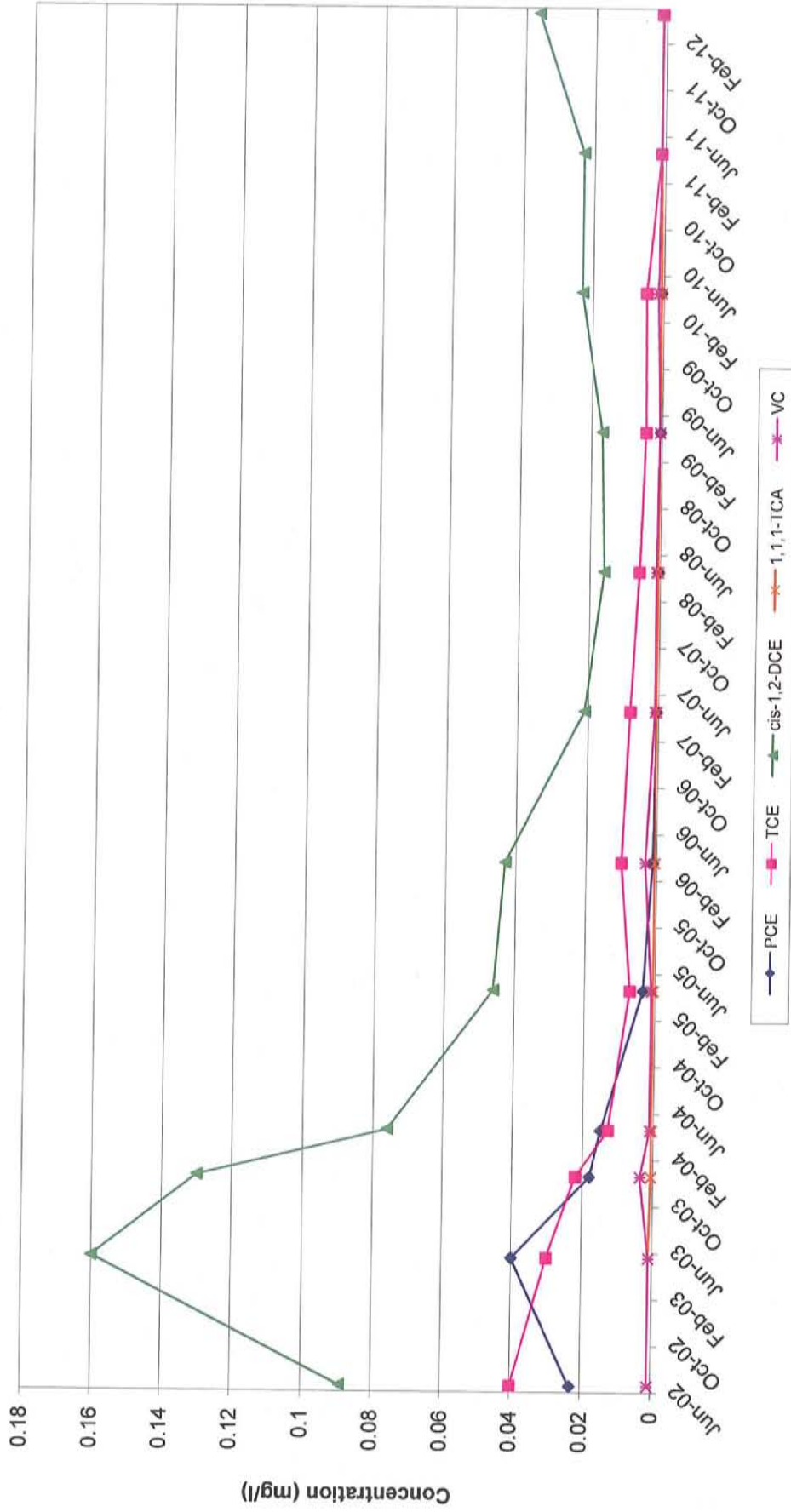
VOC Trends in Well CL04-DO  
 Former Varian Facility Site  
 Beverly, Massachusetts



Notes: CL4-DO is a deep overburden well located just east of the 31 Tozer Road Treatment Area. See end of appendix for additional notes.



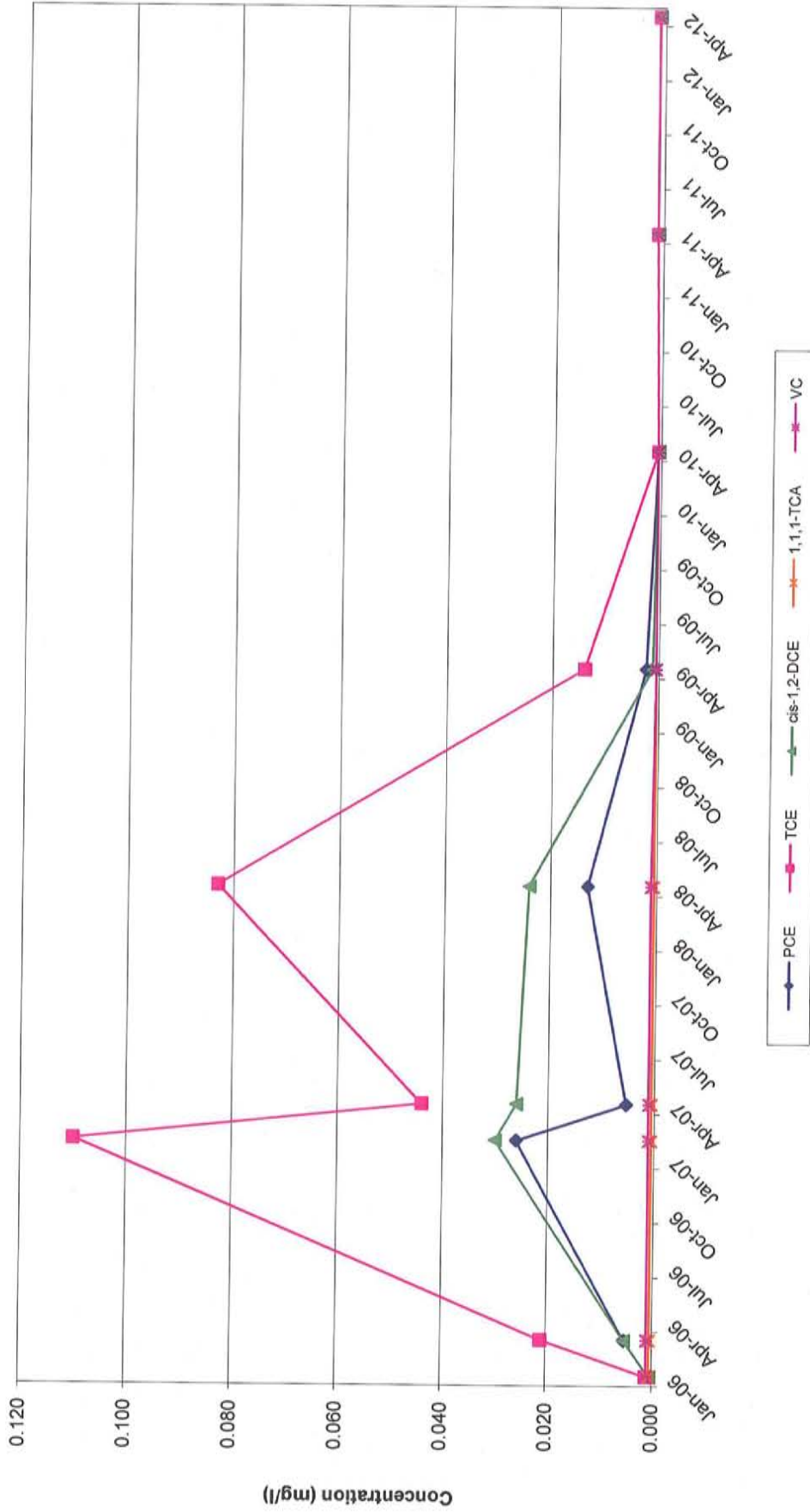
VOC Trends in Well CL04-BR  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: CL4-BR is a bedrock well located just east of the 31 Tozer Road Treatment Area. See end of appendix for additional notes.

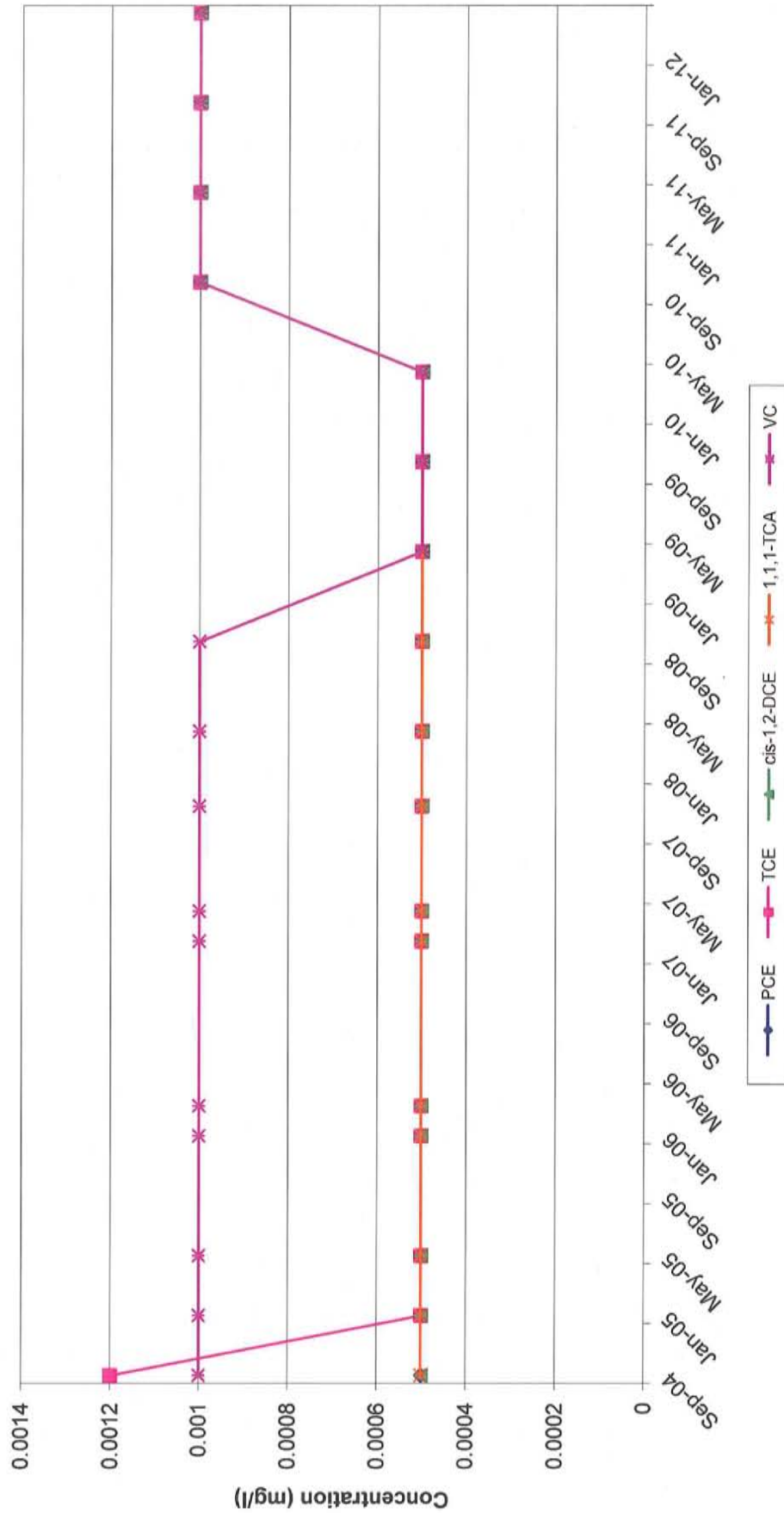
**LONGVIEW/HILL STREET TREATMENT AREA**

VOC Trends in Well P-20R  
Former Varian Facility Site  
Beverly, Massachusetts



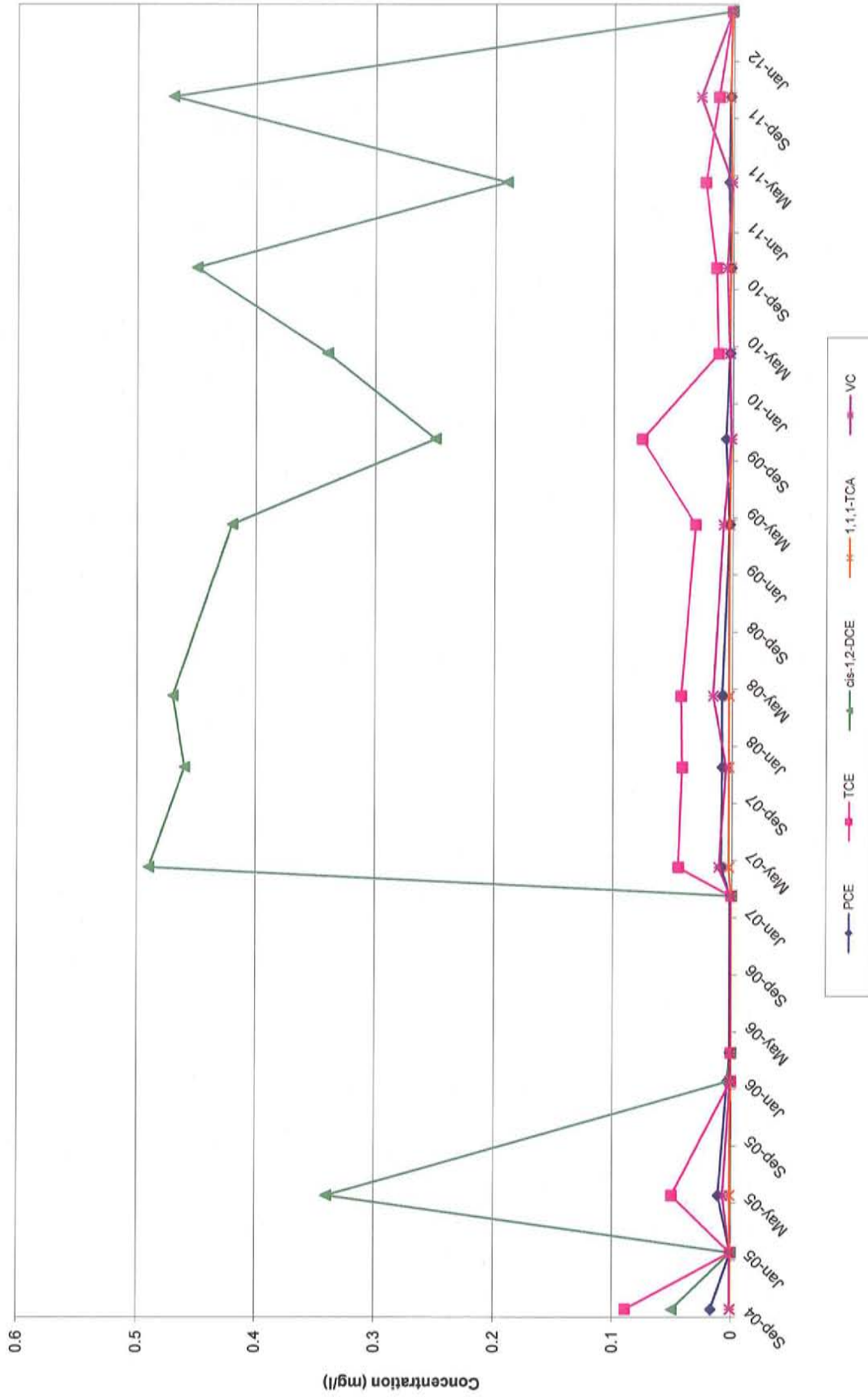
Notes: P-20R is a shallow overburden well located east of of Longview Terrace in the Longview/Hill Street area. See end of appendix for additional notes.

VOC Trends in Well OB-20-S  
Former Varian Facility Site  
Beverly, Massachusetts



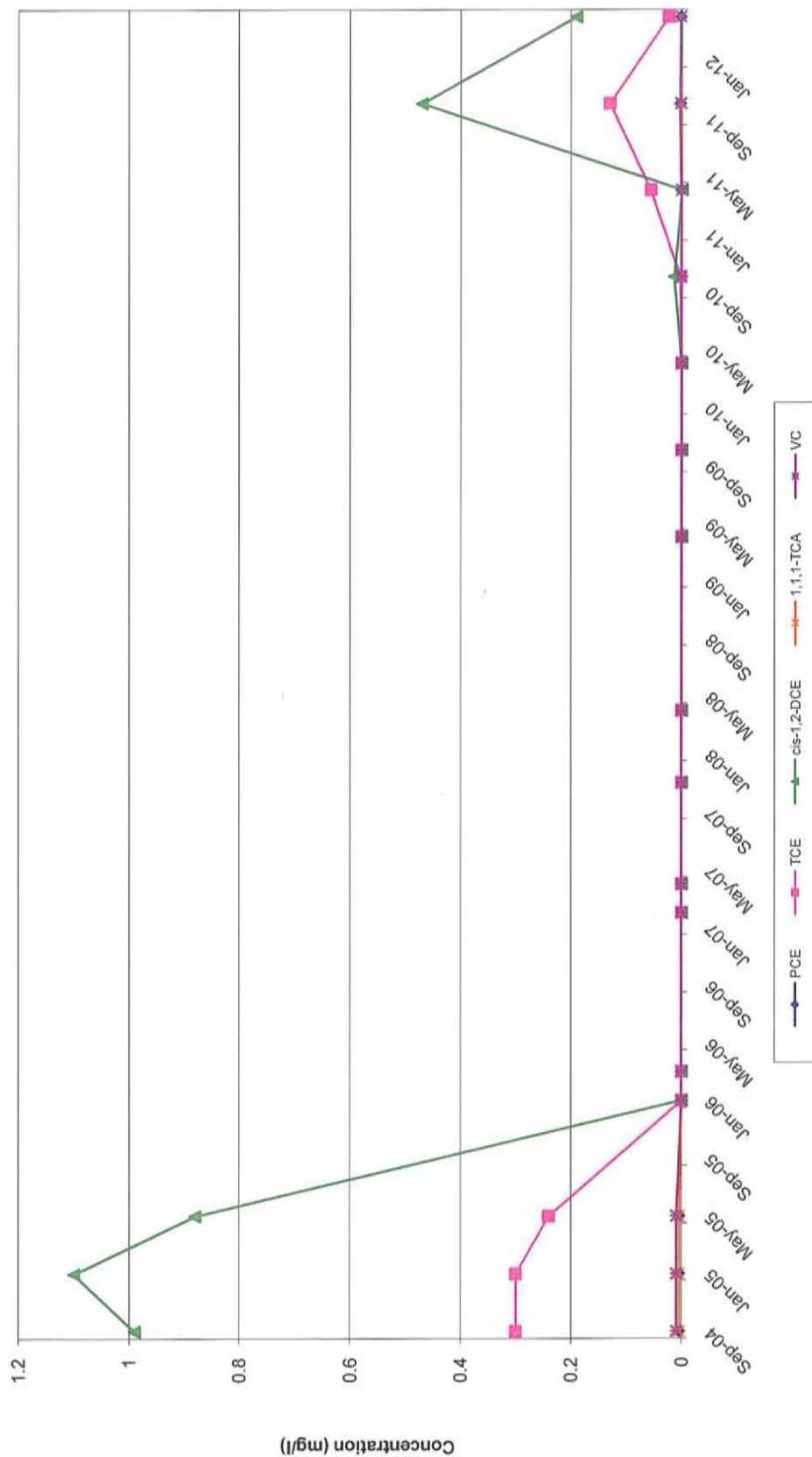
Note: OB-20-S is a shallow overburden well south of Sonning Road in the Longview/Hill Street treatment area. See end of appendix for additional notes.

VOC Trends in Well OB-20-DO  
Former Varian Facility Site  
Beverly, Massachusetts



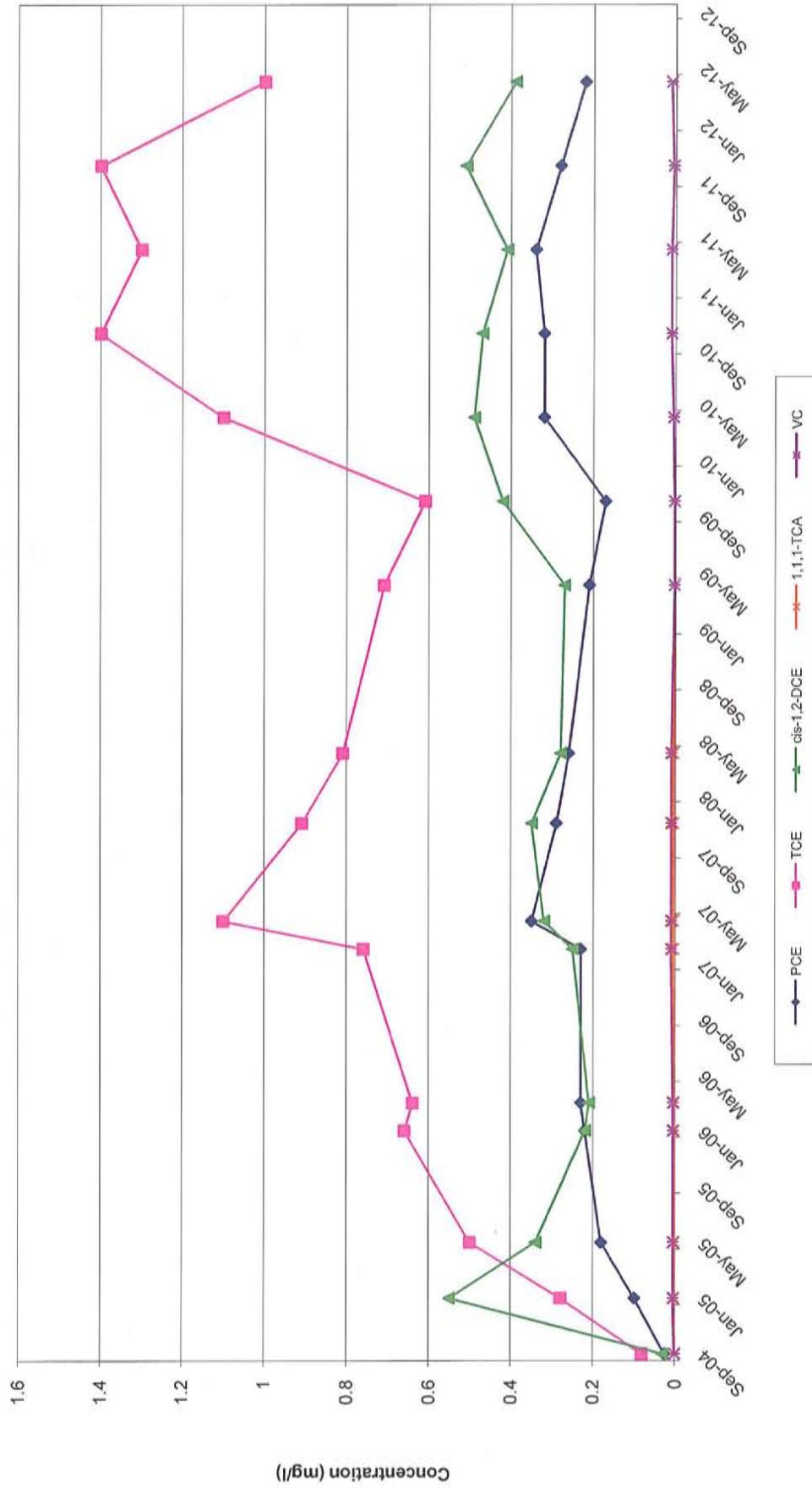
Notes: OB-20-DO is a deep overburden well south of Sonning Road in the Longview/Hill Street treatment area. See end of appendix for additional notes.

VOC Trends in Well OB-20-BR  
 Former Varian Facility Site  
 Beverly, Massachusetts



Notes: OB20-BR is a bedrock well south of Sonning Road in the Longview/Hill Street treatment area. See end of appendix for additional notes.

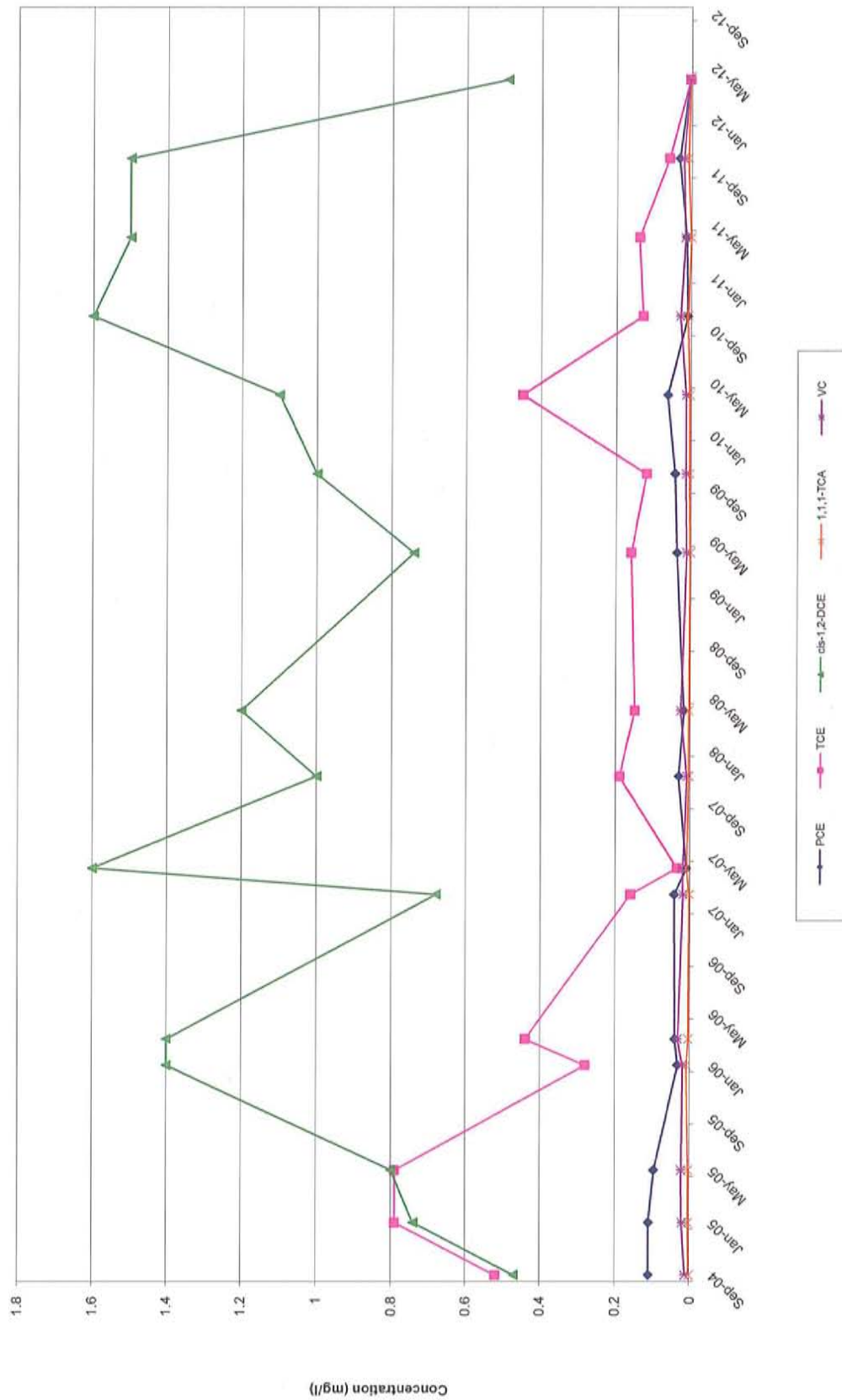
VOC Trends in Well OB-21-DO  
Former Varian Facility Site  
Beverly, Massachusetts



OB-21-DO is a deep overburden well east of Longview Terrace in the Longview/Hill Street area. See end of appendix for additional notes.



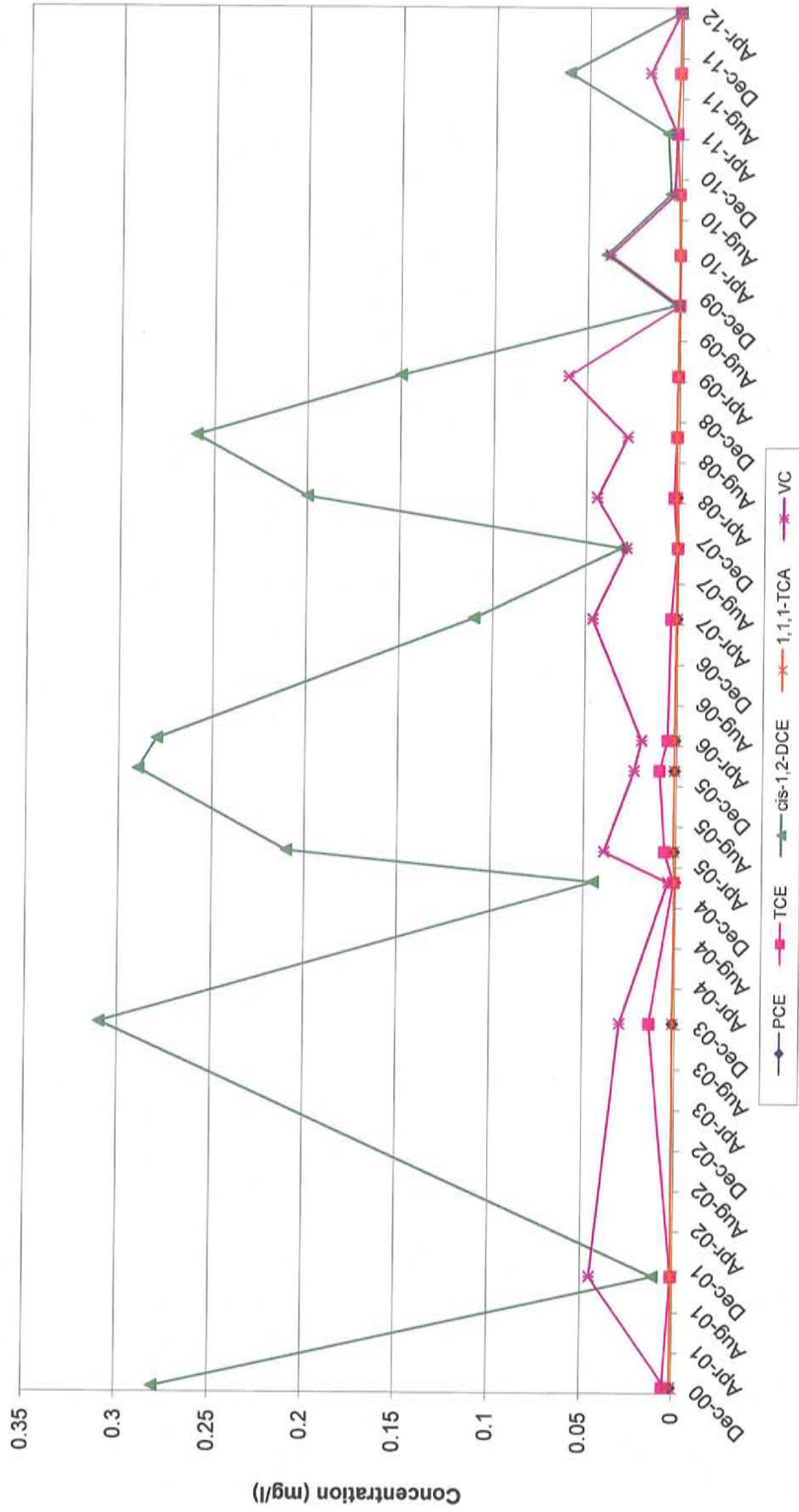
VOC Trends in Well OB-21-BR  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: OB21-BR is a bedrock well east of Longview Terrace in the Longview/Hill Street treatment area. See end of appendix for additional notes.

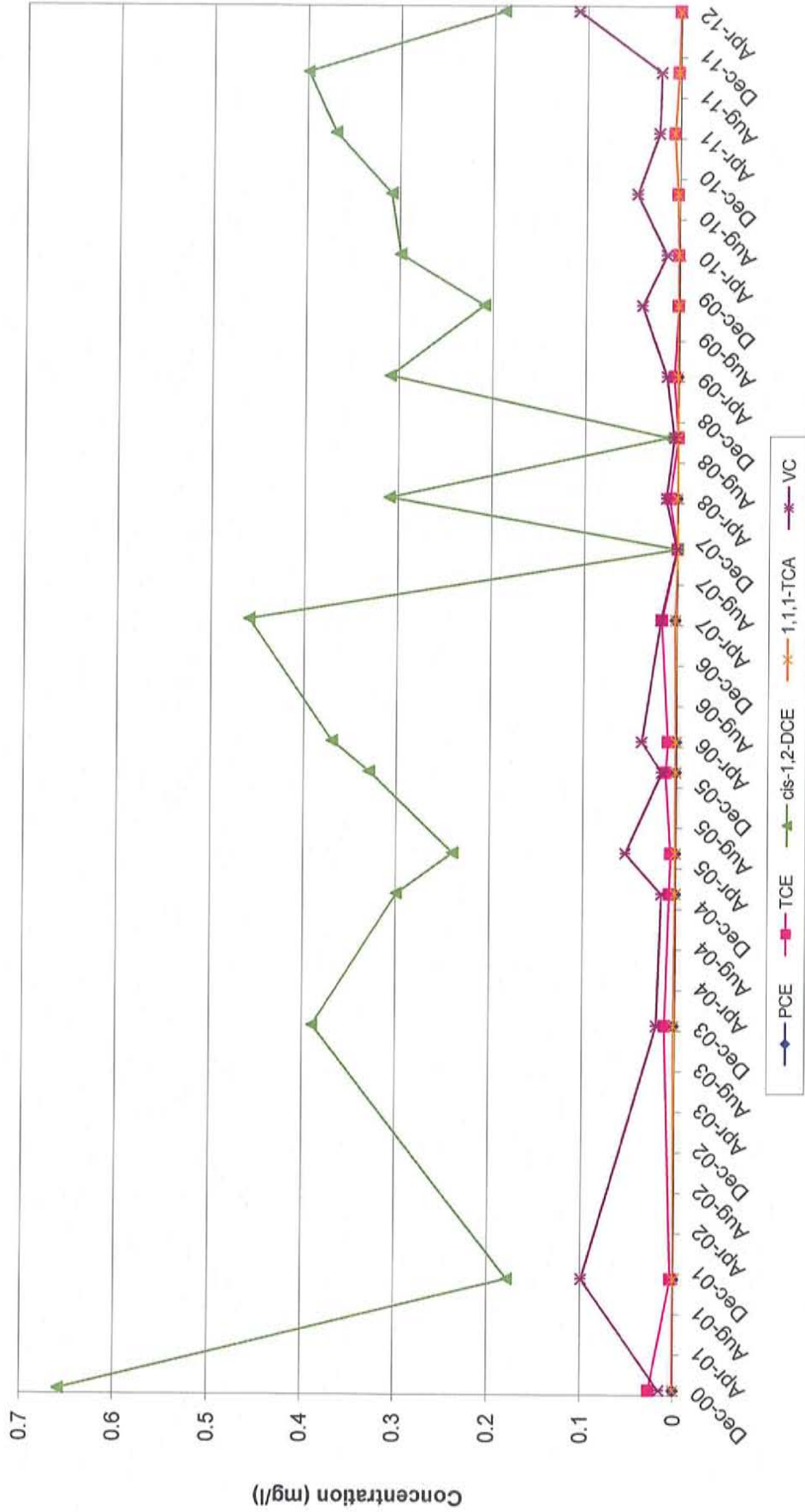


VOC Trends in Well BR-6\_ZONE3  
Former Varian Facility Site  
Beverly, Massachusetts



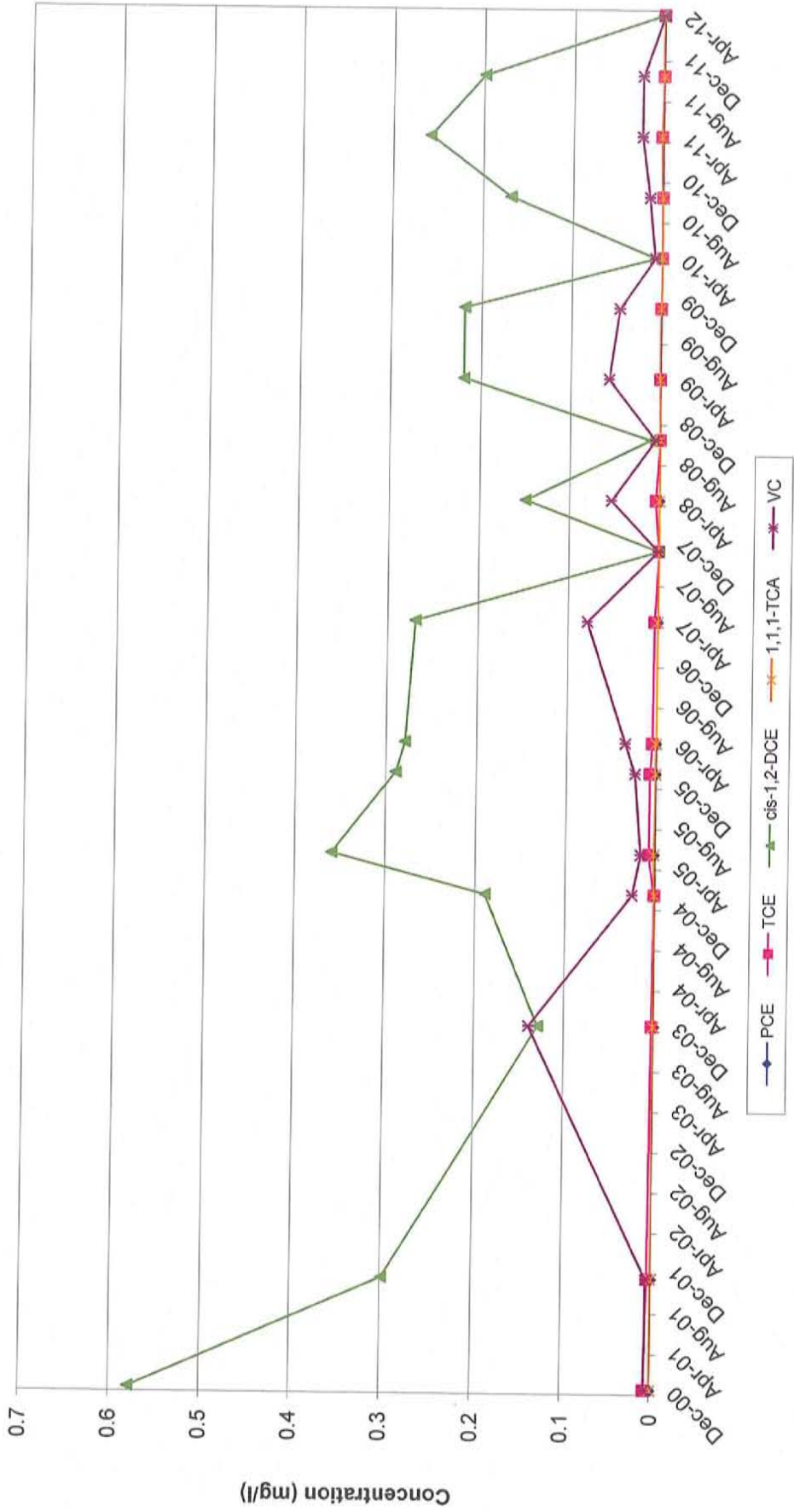
Notes: BR-6 Zone 3 is the shallowest zone of a bedrock well on Hill Street.  
See end of appendix for additional notes.

VOC Trends in Well BR-6\_ZONE2  
Former Varian Facility Site  
Beverly, Massachusetts



Notes: BR-6 Zone 2 is the middle depth zone of a bedrock well on Hill Street.  
See end of appendix for additional notes.

VOC Trends in Well BR-6\_ZONE1  
 Former Varian Facility Site  
 Beverly, Massachusetts



Notes: BR-6 Zone 1 is the deepest zone of a bedrock well on Hill Street.  
 See end of appendix for additional notes.

**APPENDIX E**

**HAZARDOUS WASTE MANIFEST**

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>	1. Generator ID Number <i>MAD000006734</i>	2. Page 1 of <i>1</i>	3. Emergency Response Phone <i>800-899-1033</i>	4. Manifest Tracking Number <b>006421772 JJK</b>							
5. Generator's Name and Mailing Address <i>Varian Medical Systems, Inc. c/o Shaw Environmental &amp; Infrastructure, 100 Technology Center Dr. Stoughton MA 02072</i>			Generator's Site Address (if different than mailing address) <i>Former Varian Facility 150 Schier Road Beverly MA 01915</i>								
6. Transporter 1 Company Name <i>Cyn Oil Corporation</i>			U.S. EPA ID Number <i>MAD082303777</i>								
7. Transporter 2 Company Name			U.S. EPA ID Number								
8. Designated Facility Name and Site Address <i>Cyn Oil Corporation 1771 Washington St. Stoughton MA 02072</i>			U.S. EPA ID Number <i>MAD082303777</i>								
Facility's Phone: <i>781 241 5109</i>											
GENERATOR	9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit WT./Vol.	13. Waste Codes				
		<i>1. Non-RCRA, Non-DOT Regulated Material</i>	No.	Type							
			<i>001</i>	<i>CM</i>	<i>15</i>	<i>Y</i>	<i>MA99</i>				
		<i>2.</i>									
		<i>3.</i>									
	<i>4.</i>										
14. Special Handling Instructions and Additional Information <i>1. Non-RCRA, non-DOT regulated soil shipped using a UHW manifest. Job # 207566-5T Truck # 819 R6#25</i>											
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.											
Generator's/Offoror's Printed/Typed Name <i>Raymond J. Cadorette Agent for vme</i>						Signature <i>[Signature]</i>		Month Day Year <i>9 11 12</i>			
INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____										
	17. Transporter Acknowledgment of Receipt of Materials										
TRANSPORTER	Transporter 1 Printed/Typed Name <i>[Signature]</i>						Signature <i>[Signature]</i>		Month Day Year <i>9 18 12</i>		
	Transporter 2 Printed/Typed Name						Signature		Month Day Year		
DESIGNATED FACILITY	18. Discrepancy										
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Manifest Reference Number: _____										
	18b. Alternate Facility (or Generator)						U.S. EPA ID Number				
	Facility's Phone:										
	18c. Signature of Alternate Facility (or Generator)						Month Day Year				
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)											
1. _____			2. _____			3. _____			4. _____		
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a											
Printed/Typed Name						Signature		Month Day Year			